

EXHIBIT E

ABANDONED

SERIAL NUMBER (Series 1987)	01/469217		PATENT DATE		PATENT NUMBER	
SERIAL NUMBER	FILING DATE	CLASS	SUBCLASS	GROUP ART UNIT	EXAMINER	
071469,217	01/24/90	364	1478	236	TRAMMELL	

SEAN C. MC DONALD, PITTSBURGH, PA; ELLEN J. HERTZ, PITTSBURGH, PA;
JAMES A. SMITH, ALLISON PARK, PA; GREGORY TOTO, PITTSBURGH, PA.

CONTINUING DATA**
VERIFIED

FOREIGN/PCT APPLICATIONS**
VERIFIED

FORGIGN FILING LICENSE GRANTED 02/22/90

***** SMALL ENTITY *****

Foreign priority claimed 35 USC 119 conditions met	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	AS FILED	STATE OR COUNTRY	SHEETS DRWGS.	TOTAL CLAIMS	INDER. CLAIMS	FILING FEE RECEIVED	ATTORNEY'S DOCKET NO.
Verified and Acknowledged	Examiner's Initials	PA	14	23	6	\$ 259.00	1797003	

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PITTSBURGH, PA 15222 *15219*

TITLE SYSTEM FOR FILING ORDERS
Selecting and Delivering Packages from Holding over to Fill orders
U.S. DEPT. of COMM.-Pat. & TM Office - PTO-436L (rev. 10-78)

PARTS OF APPLICATION
FILED SEPARATELY

NOTICE OF ALLOWANCE MAILED		PREPARED FOR ISSUE 1-31-92		CLAIMS ALLOWED	
Jan. 23, 92		Assistant Examiner <i>J. Trammell</i>	Docket Clerk <i>D. H. H. H.</i>	Total Claims 13	Print Claim 1
ISSUE FEE		JERRY SMITH SUPERVISORY PATENT EXAMINER ART UNIT 236 Primary Examiner		DRAWING	
Amount Due \$ 565.00	Date Paid			Sheets Drwg. 14	Figs. Drwg. 14
Label Area		ISSUE CLASSIFICATION		ISSUE BATCH NUMBER W52	
		Class 364	Subclass 478		
WARNING: The information disclosed herein may be restricted. Unauthorized disclosure may be prohibited by the United States Code Title 35, Sections 122, 181 and 368. Possession outside the U.S. Patent & Trademark Office is restricted to authorized employees and contractors only.					

07/469217



APPROVED FOR LICENSE

FEB 02 9 016

INITIALS

Entered
or
Counted

CONTENTS

Received
or
Mailed

1.	Application <u>14</u> papers.	
2.	<u>Deletion 3 mos.</u>	<u>5/10/91/17</u>
3.	<u>Xtime 3 mo change of address</u>	<u>11-4-91</u>
4.	<u>Amstr</u>	<u>11-4-91</u>
5.	<u>CLR. And</u>	<u>1/23/92/22</u>
6.	<u>Rev 4 P/A</u>	<u>11-4-91</u>
7.	<u>Notice of Acceptance</u>	<u>1-30-91</u>
8.	ABANDONED	OCT 22 1992
9.	<u>Request for Secor</u>	<u>1/24/06</u>
10.	<u>Request for Cross</u>	<u>12-4-06</u>
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INDEX OF CLAIMS

Claim		Date	
Final	Original		
	6	11/11/11	
	7	11/11/11	
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SYMBOLS
✓ Rejected
= Allowed
- (Through numeral) Canceled
+ Restricted
N Non-elected
I Interference
A Appeal
O Objected

Claim		Date	
Final	Original		
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SEARCHED			
Class	Sub.	Date	Exmr.
364 235 221	478 479 413.01 413.02 385 381 7 15	4/14/11	JPT
Search	update	1/14/12	JPT
414	788 789 790 791 266 267 273 253 235 234 240	1/14/12	JPT

INTERFERENCE SEARCHED			
Class	Sub.	Date	Exmr.
As shown above		1/14/12	JPT

SEARCH NOTES		
APR terms:	Date	Exmr.
medin? medic? Drug # Bar code? order # package Prescription pill computer cpu microprocessor processor	4/17/11	JPT
APR update terms? Package rod computer cpu microprocessor processor controller Automatic storage retrieval	1/14/12	JPT

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PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

060 01/30/90 07469217

1 201 265.00 CK

BN30118 02/07/90 07469217

01-0693 030 201 26.00CR

11/469217



PATENT

Docket No. 1797.003

Commissioner of Patents and Trademarks
Washington, D.C. 20231

NEW APPLICATION TRANSMITTAL

Transmitted herewith for filing is the patent application of

Inventor(s): **Sean C. McDonald, Ellen J. Hertz, James A. Smith,
Gregory Toto**

WARNING: Patent must be applied for in the name(s) of all of the actual inventor(s). 37 CFR 1.41(a) and 1.53(b).

For (title): **A SYSTEM FOR FILLING ORDERS**

1. Type of Application

This new application is for a(n) (check one applicable item below):

- ☒ Original
☐ Design
☐ Plant

WARNING: Do not use this transmittal for a completion in the U.S. of an International Application under 35 U.S.C. 371(c)(4) unless the International Application is being filed as a divisional, continuation or continuation-in-part application.

NOTE: If one of the following 3 items apply then complete and attach **ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF A PRIOR U.S. APPLICATION CLAIMED.**

- ☐ Divisional
☐ Continuation
☐ Continuation-in-part (CIP)

CERTIFICATION UNDER 37 CFR 1.10

I hereby certify that this New Application Transmittal and the documents referred to as enclosed therein are being deposited with the United States Postal Service on this date January 24, 1990 in an envelope as "Express Mail Post Office to Addressee" Mailing Label Number MB137703082 addressed to the: Commissioner of Patents and Trademarks, Washington, D.C. 20231.

Tracey L. Milka

(Type or print name of person mailing paper)

Tracey L. Milka
(Signature of person mailing paper)

NOTE: Each paper or fee referred to as enclosed herein has the number of the "Express Mail" mailing label placed thereon prior to mailing. 37 CFR 1.10(b).

2. Benefit of Prior U.S. Application(s) (35 USC 120)

NOTE: If the new application being transmitted is a divisional, continuation or a continuation-in-part of a parent case, or where the parent case is an International Application which designated the U.S., then check the following item and complete and attach ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

- ☐ The new application being transmitted claims the benefit of prior U.S. application(s) and enclosed are ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

3. Papers Enclosed Which Are Required For Filing Date Under 37 CFR 1.53(b) (Regular) or 37 CFR 1.153 (Design) Application

14 Pages of specification

8 Pages of claims

1 Pages of Abstract

14 Sheets of drawing

☐ formal

☒ informal

WARNING: DO NOT submit original drawings. A high quality copy of the drawings should be supplied when filing a patent application. The drawings that are submitted to the Office must be on strong, white, smooth, and non-shiny paper and meet the standards according to § 1.84. If corrections to the drawings are necessary, they should be made to the original drawing and a high-quality copy of the corrected original drawing then submitted to the Office. Only one copy is required or desired. Comments on proposed new 37 CFR 1.84. Notice of March 9, 1988 (1990 O.G. 57-62).

NOTE: "Identifying indicia such as the serial number, group and unit, title of the invention, attorney's docket number, inventor's name, number of sheets, etc., not to exceed 2 3/4 inches (7.0 cm.) in width may be placed in a centered location between the side edges within three fourths inch (19.1 mm.) of the top edge. Either this marking technique on the front of the drawing or the placement, although not preferred, of this information and the title of the invention on the back of the drawings is acceptable." Proposed 37 CFR 1.84(1). Notice of March 9, 1988 (1090 O.G. 57-62).

4. Additional papers enclosed

- ☐ Preliminary Amendment
- ☐ Information Disclosure Statement
- ☐ Form PTO-1449
- ☐ Citations
- ☐ Declaration of Biological Deposit
- ☐ Authorization of Attorney(s) to Accept and Follow Instructions from Representative
- ☐ Special Comments
- ☐ Other

5. Declaration or oath☒ Enclosedexecuted by (check **all** applicable boxes)☒ inventor(s).☐ legal representative of inventor(s). 37 CFR 1.42 or 1.43☐ joint inventor or person showing a proprietary interest on behalf of inventor who refused to sign or cannot be reached.☐ this is the petition required by 37 CFR 1.47 and the statement required by 37 CFR 1.47 is also attached. *See item 13 below for fee.*☐ Not Enclosed.

WARNING: Where the filing is a completion in the U.S. of an International Application but where a declaration is not available or where the completion of the U.S. application contains subject matter in addition to the International Application the application may be treated as a continuation or continuation-in-part, as the case may be, utilizing **ADDED PAGE FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION CLAIMED.**

☐ Application is made by a person authorized under 37 CFR 1.41(c) on behalf of *all* the above named inventor(s). The declaration or oath, along with the surcharge required by 37 CFR 1.16(e) can be filed subsequently.

Note: It is important that **all** the correct inventor(s) are named for filing under 37 CFR 1.41(c) and 1.53(b).

☐ Showing that the filing is authorized. (Not required unless called into question. 37 CFR 1.41(d).)**6. Inventorship Statement**

WARNING: If the named inventors are each not the inventors of **all** the claims an explanation, including the ownership of the various claims at the time the **last** claimed invention was made, should be submitted.

The inventorship for all the claims in this application are:

☒ The same

or

☐ Are not the same. An explanation, including the ownership of the various claims at the time the **last** claimed invention was made,☐ is submitted.☐ will be submitted.**7. Language**

NOTE: An application including a signed oath or declaration may be filed in a language other than English. A verified English translation of the non-English language application and the processing fee of \$30.00 required by 37 CFR 1.17(k) is required to be filed with the application or within such time as may be set by the Office. 37 CFR 1.52(d).

NOTE: A non-English oath or declaration in the form provided or approved by the PTO need not be translated. 37 CFR 1.69(b).

☒ English☐ non-English☐ the attached translation is a verified translation. 37 CFR 1.52(d).

8. Assignment☒ An assignment of the invention to Automated Healthcare, Inc.☒ is attached.☐ will follow.**9. Certified Copy**

Certified copy(ies) of application(s)

(country)	(appln. no.)	(filed)
(country)	(appln. no.)	(filed)
(country)	(appln. no.)	(filed)

from which priority is claimed

☐ is(are) attached.☐ will follow.

Note: The foreign application forming the basis for the claim for priority must be referred to in the oath or declaration. 37 CFR 1.55(a) and 1.63.

NOTE: This item is for any foreign priority for which the application being filed directly relates. If any parent U.S. application or International Application from which this application claims benefit under 35 U.S.C. 120 is itself entitled to priority from a prior foreign application then complete item 18 on the ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

10. Fee Calculation (37 CFR 1.16)**A. ☒ Regular application**

CLAIMS AS FILED						
	Number filed		Number Extra		Rate	Basic Fee \$370.00
Total						
Claims	23	- 20 =	3	X	\$ 12.00	36.00
Independent						
Claims (37 CFR 1.16(b))	6	- 3 =	3	X	\$ 36.00	108.00
Multiple dependent claim(s), if any (37 CFR 1.16(d))					\$120.00	

☐ Amendment cancelling extra claims enclosed.☐ Amendment deleting multiple dependencies enclosed.☐ Fee for extra claims is not being paid at this time.

NOTE: If the fees for extra claims are not paid on filing they must be paid or the claims cancelled by amendment, prior to the expiration of the time period set for response by the Patent and Trademark Office in any notice of fee deficiency. 37 CFR 1.16(d).

Filing Fee Calculation

\$ 514.00

- B. ☐ Design application
(\$150.00—37 CFR 1.16(f))

Filing Fee Calculation

\$ _____

- C. ☐ Plant application
(\$250.00—37 CFR 1.16(g))

Filing fee calculation

\$ _____

11. Small Entity Statement(s)

- ☒ Verified Statement(s) that this is a filing by a small entity under 37 CFR 1.9 and 1.27 is(are) attached.

Filing Fee Calculation (50% of A, B or C above)

\$ 257.00

NOTE: Any excess of the full fee paid will be refunded if a verified statement and a refund request are filed within 2 months of the date of timely payment of a full fee. 37 CFR 1.28(a).

12. Request for International-Type Search (37 CFR 1.104(d)) (complete, if applicable)

- ☐ Please prepare an international-type search report for this application at the time when national examination on the merits takes place.

13. Fee Payment Being Made At This Time

- ☐ Not Enclosed

- ☐ No filing fee is to be paid at this time. (This and the surcharge required by 37 CFR 1.16(e) can be paid subsequently.)

- ☒ Enclosed

- ☒ basic filing fee

\$ 257.00

- ☒ recording assignment
(\$8.00; 37 CFR 1.21(h))

\$ 8.00

- ☐ petition fee for filing by other than all the inventors or person on behalf of the inventor where inventor refused to sign or cannot be reached. (\$120.00; 37 CFR 1.47 and 1.17(h))

\$ _____

- ☐ for processing an application with a specification in a non-English language. (\$30.00; 37 CFR 1.52(d) and 1.17(k))

\$ _____

- ☐ processing and retention fee
(\$120.00; 37 CFR 1.53(d) and 1.21(l))

- ☐ fee for international-type search report (\$30.00; 37 CFR 1.21(e)).

\$ _____

NOTE: 37 CFR 1.21(l) establishes a fee for processing and retaining any application which is abandoned for failing to complete the application pursuant to 37 CFR 1.53(d) and this, as well as the changes to 37 CFR 1.53 and 1.78, indicate that in order to obtain the benefit of a prior U.S. application, either the basic filing fee must be paid or the processing and retention fee of § 1.21(l) must be paid within 1 year from notification under § 53(d).

Total fees enclosed

\$ 265.00

14. Method of Payment of Fees

- ☒ Check in the amount of \$ 265.00 (CK. ~~\$164~~)
☐ Charge Account No. 8.00 (CK. ~~\$165~~) in the amount of \$_____. A duplicate of this transmittal is attached.

NOTE: Fees should be itemized in such a manner that it is clear for which purpose the fees are paid. 37 CFR 1.22(b).

15. Authorization to Charge Additional Fees

WARNING: If no fees are to be paid on filing the following items should not be completed.

WARNING: Accurately count claims, especially multiple dependent claims, to avoid unexpected high charges, if extra claim charges are authorized.

- ☒ The Commissioner is hereby authorized to charge the following additional fees by this paper and during the entire pendency of this application to Account No. 01-0693:

- ☒ 37 CFR 1.16(a), (f) or (g) (filing fees)
☒ 37 CFR 1.16(b), (c) and (d) (presentation of extra claims)

NOTE: Because additional fees for excess or multiple dependent claims not paid on filing or on later presentation must only be paid or these claims cancelled by amendment prior to the expiration of the time period set for response by the PTO in any notice of fee deficiency (37 CFR 1.16(d)), it might be best not to authorize the PTO to charge additional claim fees, except possibly when dealing with amendments after final action.

- ☐ 37 CFR 1.16(e) (surcharge for filing the basic filing fee and/or declaration on a date later than the filing date of the application)
☐ 37 CFR 1.17 (application processing fees)

WARNING: While 37 CFR 1.17(a), (b), (c) and (d) deal with extensions of time under § 1.136(a) this authorization should be made only with the knowledge that "Submission of the appropriate extension fee under 37 C.F.R. 1.136(a) is to no avail unless a request or petition for extension is filed." (Emphasis added). Notice of November 5, 1985 (1060 O.G. 27).

- ☐ 37 CFR 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 CFR 1.311(b))

NOTE: Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of a Notice of Allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance. 37 CFR 1.311(b).

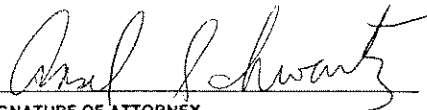
NOTE: 37 CFR 1.28(b) requires "Notification of any change in loss of entitlement to small entity status must be filed in the application . . . prior to paying, or at the time of paying, . . . issue fee". From the wording of 37 CFR 1.28(b): (a) notification of change of status must be made even if the fee is paid as "other than a small entity" and (b) no notification is required if the change is to another small entity.

16. Instructions As To Overpayment

- ☒ credit Account No. 01-0693
☐ refund

Reg. No. 30,587

Tel. No. (412) 394-4900


 SIGNATURE OF ATTORNEY
Ansel M. Schwartz, Esquire
 Type or print name of attorney
Alder, Cohen & Grigsby, P.C.
 P.O. Address 2900 CNG Tower
625 Liberty Avenue
Pittsburgh, PA 15222
 (Application Transmittal [4-1]—page 6 of 7)

☐ **Incorporation by reference of added pages**

Check the following item if the application in this transmittal claims the benefit of prior U.S. application(s) (including an international application entering the U.S. stage as a continuation, divisional or C-I-P application) and complete and attach the ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED

☐ Plus Added Pages For New Application Transmittal Where Benefit Of Prior U.S. Application(s) Claimed

Number of pages added _____

☐ Plus Added Pages For Papers Referred To In Item 4 Above

Number of pages added _____

☒ **Statement Where No Further Pages Added**

(If no further pages form a part of this Transmittal then end this Transmittal with this page and check the following item)

☒ This transmittal ends with this page.



265.12-201

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07/469217

~~A SYSTEM FOR FILLING ORDERS~~FIELD OF THE INVENTION

The present invention relates to filling orders. More specifically, the present invention relates to the automated filling of prescription and automated restocking of medicines used for filling the orders.

BACKGROUND OF THE INVENTION

Currently, in large hospital environments, doctors visit patients in nursing units and write out medication orders for each patient. A patient is typically placed on a certain medication treatment which requires multiple doses of medication over a period of a day. Some medications are administered at certain times of the day and possibly at intervals of several hours. Patients may also request certain medications on an elective basis for disorders such as headaches. These requests are included in the doctor's order that is sent from the nursing unit to the central pharmacy of the hospital.

Once an order is received by the pharmacy, it is checked by registered pharmacists and input into the pharmacy information system. These orders reflect not only orders that are added to a particular patient's treatment but changes in the medication treatment. The pharmacy information system combines this information with the patient's existing medication schedule and develops a patient medication profile. A fill list is generated from that profile. The fill list is a list of all the medications that must be distributed to all patients for the day. This information is sent to the pharmacy printer where a hard copy is generated.

At this point, the drugs for a particular patient are hand picked by either a pharmacist or a pharmacy technician and placed in the particular patient's designated box. A registered pharmacist must then check the accuracy of the patient order before it leaves the pharmacy. Individual patient boxes are then loaded into a large cassette and delivered to the nursing unit.

Approximately 30% of the drugs dispensed each day are returned to the pharmacy unused. Since each drug is individually packaged, the drugs must be returned to the pharmacy stock. Patients are then credited for unused medication. This

1 return and crediting process is a very time consuming task and requires significant
2 amount of pharmacy man power.

3 Currently, this is a very time consuming, man power intensive task. In a typical
4 large pharmacy up to 35 pharmacists and pharmacy technicians are responsible for all
5 aspects of the unit dose dispensing task. Because this process is done manually a
6 certain amount of error exists. Studies have estimate that a half percent error rate is
7 typical in a large hospital. Since a hospital may dispense over 6000 doses each day,
8 this error rate leads to a significant number of missed or incorrect doses.

9 Several companies have tried to automate this process through various
10 approaches to the problem. Meditrol, utilizes a vending machine approach to dispense
11 the unit dose medications. Each nursing unit must have it's own stock of prescription
12 drugs. Nurses key in a patient ID and the drugs for that patient are then dispensed
13 from the vending machine. This system is very expensive due to the necessity of
14 purchasing a system for each nursing unit. Also, restocking each machine is a very
15 time consuming task. Implementation of the system requires a complete modification of
16 the current drug dispensing process which many hospitals are reticent to undertake.
17 The system claims no labor saving advantages from it's implementation. This system
18 is covered under patent number 3,917,045 titled "Drug Dispensing Apparatus" and
19 dated Nov. 11, 1975.

20 Baxter Travenol uses a dispensing system from Samsung, a Korean company,
21 which dispenses bulk solids into a package which is dispensed to the pharmacist. This
22 system only dispenses the 200 most frequently used solids. A typical hospital
23 formulary can contain over 1500 different medications, many in liquid, syringe or bottle
24 form. These medications must be manually picked by the pharmacy.

25 Neither system allows the dispensed medications to be automatically returned
26 to the storage area.

27 In the preferred embodiment of the invention described herein, the Automated
28 Pharmacy Station™, or APS™, is able to dispense all dosage forms currently
29 contained in a hospital pharmacy. Medicines are automatically dispensed by the
30 system per a patient order and placed in medication boxes for the pharmacist's check.
31 Each drug is individually barcoded so that the accuracy of the dispensing process can
32 be automatically checked by the system. Once drugs are returned to the pharmacy the
33 system automatically returns the drugs to it's inventory and credits the patient's
34 account for the drugs dispensed. The hospital will recognize significant labor savings
35 as well as savings based on improved accuracy in the dispensing function and better
36 tracking of inventory and expired medications.

1
2 SUMMARY OF THE INVENTION
3

4 The present invention pertains to a system for filling orders, such as
5 prescriptions for patients. The system comprises means for holding packages. Each
6 package has the same type of contents being held in a predetermined location by the
7 holding means. Each package has an identity which defines the contents therein. The
8 holding means has a plurality of predetermined locations corresponding to a plurality
9 of different types of contents. Additionally, the system is comprised of means for
10 supplying packages to the holding means. Also, there is a means for picking a
11 package from the holding means that is identified in the order for the purpose of filling
12 the order, or from the supplying means for the purpose of restocking the holding
13 means. The picking means is in communication with the holding means and the
14 supplying means.

15
16 In the preferred embodiment, the contents of each package is a single dose of
17 medicine.
18
19

BRIEF DESCRIPTION OF THE DRAWINGS

In the accompanying drawings, the preferred embodiments of the invention and preferred methods of practicing the invention are illustrated in which :

Figure 1 is a schematic representation of a system for filling orders.

Figure 2 is a side view of a package.

Figure 3 is a perspective view of a schematic representation of a storage structure.

Figure 4a is a perspective view of a schematic representation of an end of arm tooling.

Figure 4b is a side cutaway representation of an end of arm tooling.

Figure 4c is a schematic representation of the mounting means for an end of arm tooling.

Figure 5 is a schematic representation of a side view of a support structure 28 with the tooling structure.

Figure 6a is a perspective view of a schematic representation of a rod connected to a back rod support bar.

Figure 6b is a schematic representation of a side view of a first rod and a second rod in a support structure.

Figure 7 is a schematic representation of an overhead view of an alternative system for filling an order.

Figure 8 is a flowchart of the filling process.

Figure 9 is a flowchart of the check process.

Figure 10 is a flowchart of the return process of medicines packages from a nursing unit.

Figure 11 is a flowchart of the restocking process.

1
2
3 DESCRIPTION OF THE PREFERRED EMBODIMENT
4

5 Referring now to the drawings wherein like reference numerals refer to similar or
6 identical parts throughout the several views, and more specifically to Figure 1 thereof,
7 there is shown a schematic representation of a system 10 for filling orders, such as
8 prescriptions for patients. The system 10 is comprised of means 12 for holding
9 packages. Each package has the same type of contents, such as a same type of
10 medicine and preferably a single dosage of the medicine. Each package having the
11 same medicine is held at a predetermined location by the holding means 12. Each
12 package 14 has an identity 16, preferably a bar code, which defines the contents, and
13 preferably the dosage of and expiration date of the medicine contained therein, as
14 shown in Figure 2. Figure 2 is a schematic representation of a package 14.

15
16 For instance, in a preferred embodiment the package 14 could have A equal 3.50
17 inches, B equal 1.0 inches, C equal 3.0 inches and D equal 0.1875 inches.
18 Alternatively, the package 14 can have A equal 5 inches, B equal 1.25 inches, C equal
19 5.0 inches and D equal 0.1875 inches. The holding means 12 has a plurality of
20 predetermined locations 18 corresponding to a plurality of different types of contents,
21 such as medicines, as shown in Figure 3. Figure 3 is a schematic representation of a
22 perspective view of the holding means 12.

23
24 An individual dose of medicine can be manually fed into an automated packaging
25 system 98, as shown in Figure 1, which automatically seals the package and prints a
26 barcode label directly on the package. In a preferred embodiment there is utilized the
27 H-100™ packaging system as manufactured by Automated Packaging Systems of
28 Twinsburg, Ohio. With the addition of the Accu-Print™ 100 Programmable In-Line
29 Direct Transfer Imprinter, also manufactured by Automated Packaging Systems, a
30 barcode label can be printed directly on the medicine package.

31
32 The system 10 is also comprised of means 20, such as a restock rack, for supplying
33 packages 14 to the holding means 12, as shown in Figure 1. There is also means 22
34 for picking a package 14 from the holding means 12 that is identified in the order, such
35 as a prescription, for the purpose of filling that prescription, or from the supplying

1 means 20 for the purpose of restocking the holding means 12. The picking means 22
2 is in communication with the holding means 12 and the supplying means 20.

3

4 The system 10 is also comprised of means 43, such as a pneumatic actuator, for
5 allowing the system 10 to position the picking means 38, in front of either holding
6 means 12, as shown in Figure 4. In the preferred embodiment, the picking means 38,
7 is mounted on a support rod 41 attached to the Y dimension of the tooling support
8 structure 44. A conceptual drawing of this device is described in Figure 8. This
9 structure 41, has means 45, for pneumatically flipping the picking means 38,
10 approximately 180°, such that the face of the gripper 38, is parallel to the X dimension.
11 This is activated in order to retrieve medicines as described below from either side of
12 the holding means 12.

13

14 The picking means 22 can include a computer 24, or local area network of computers,
15 having a database. The database has the order, such as a prescription, to be filled,
16 and a record of the predetermined locations 18 of, for instance each different medicine
17 in the holding means 12. The computer 24 guides the picking means 22 based on
18 information contained in the database such that the picking means 22 picks a
19 medicine package 14 according to the prescription to be filled. The picking means 22
20 can also include means, such as a bar code reader 26 as shown in Figure 4a, for
21 determining the identity 16 of a medicine package 14 in the supplying means 20 and
22 providing its identity 16 to the computer 24. The computer 24 guides the picking
23 means 22 such that the holding means 12 is restocked with the identified medicine
24 package 14 from the supplying means 20 according to the medicine in the medicine
25 package 14 and its predetermined location 18 in the holding means 12 that is known
26 by the computer 24.

27

28 The holding means 12 can include a structure 28 as shown in Figure 3. The holding
29 means 12 can also include support rods 30 held by the structure 28. The rods 30 hold
30 the medicine packages 14, as shown in Figure 6a. Each rod 30 is associated with a
31 given medicine and holds medicine packages 14 with only the same medicine.

32

33 The structure 28 can include a plurality of back rod supports 32 from which the rods 30
34 extend. The back rod supports 32 snap into place in the structure 28, as is well known
35 in the art. The structure 28 with rod supports 32 forms an X,Y coordinate system with
36 each rod 30 and medicine packages 14 therein having a unique X,Y coordinate. The

1 picking means 22 is disposed adjacent to the structure 28, as shown in Figure 1, such
2 that a given medicine package 14 on an associated rod 30 can be picked by the
3 picking means 22 to fill a patient's prescription; or a given medicine package 14 in the
4 supplying means 20 can be picked by the picking means 22 to restock an associated
5 rod 30.

6
7 The system 10 can include a conveyor 34 in communication with the picking means
8 22. The system can also include patient prescription boxes 36 which are moved by
9 the conveyor 34 to the picking means 22 such that the picking means 22 provides the
10 medicine packages 14 that are picked to fill a given prescription to an associated box
11 36.

12
13 The picking means 22 can include at least one end of arm tooling 38, as shown in
14 Figures 4a and 4b, that picks the medicine packages 14. Figure 4a is a perspective
15 view of a schematic representation of the end of arm tooling 38. Figure 4b is a
16 simplified side view of the end of arm tooling. The picking means 22 also can include
17 a tooling support structure 40, as shown in Figure 5. The tooling support structure has
18 at least one column 44 to support the tooling 38 and at least one row 42 to support the
19 column 44 such that the tooling 38 in a housing 49 thereof moves along the column 44
20 under the power of a drive motor 47 to pick a given medicine package 14 hanging
21 from a corresponding support rod 30; or restock a given medicine package 14 on a
22 corresponding support rod 30. The picking means 22 can also include means 46 for
23 moving the column 44 with respect to the row 42. The moving means 46 is controlled
24 by the computer 24.

25
26 The end of arm tooling 38 is preferably comprised of a housing 49, as shown in Figure
27 4a. The tooling 38 is also comprised of means for storing medicine packages 14, such
28 as a storing rod 48, attached to the housing 49. The tooling 38 is also comprised of
29 means 50 for obtaining a medicine package 14. The obtaining means 50 is slidably
30 attached to the housing 49 such that it can move in a Z direction, which is
31 perpendicular to the X,Y directions, to pick a medicine package 14 from a support rod
32 30 in the support structure 28 to which the housing 49 is adjacent and with which it is
33 aligned. The identifying means, for example, the bar code reader 26, is mounted on
34 the end of arm tooling 38 such that it can identify a package 14 to be picked by the
35 obtaining means 50.

36

1 The obtaining means 50 preferably includes means for producing a suction, such as
2 an air line 55 controlled by a vacuum valve 54. The obtaining means 50 also
3 preferably includes an extension rod 52 in fluidic communication with a pneumatic
4 cylinder 53, as shown in Figure 4b. The extension rod 52 is slidingly attached with
5 respect to the Y and Z directions to the housing 49. A suction is maintained through
6 the air lines 55 when the vacuum valve 54 is activated. The obtaining means 50 also
7 can include a suction head 56 connected to the extension rod 52 through which a
8 medicine package 14 is picked with suction. The obtaining means 50, preferably also
9 includes means 58 for sensing when a package 14 is properly positioned on the
10 suction head 56 for example by detecting air flow therethrough. The suction head 56
11 is then moved to the storing means, such as the storing rod 48, to deposit the package
12 14 thereon. Preferably, the storing means is a storing rod 48 which extends from the
13 housing 49 such that the suction head 56 and the extension rod 52 can deposit a
14 package 14 thereon.

15
16 The extension rod 52 can move in the Y and Z directions to place a picked package 14
17 on the storing rod 48 under the action of vacuum valves and cylinders 51 and 53. The
18 vacuum valve 57 activates cylinder 51 to move both the cylinder 53 and the extension
19 rod 52 in the Y direction. The vacuum valve 59 activates cylinder 53 to move the
20 extension rod in the Z direction. The vacuum valve 54 provides suction to the air lines
21 55 and suction head 56 sufficient to pick a package 14 from a rod 30 of the support
22 structure 28 and then hold it to the suction head 56. The suction head 56 preferably
23 has two faces 60 and 61 through which suction can be drawn. One face 60 is capable
24 of picking a package 14 off of a rod 30 of the support structure 28 and the other face 61
25 is capable of picking a package 14 off of a storing rod 48. Preferably, the two faces 60
26 and 61 are parallel to each other and are parallel to the X axis. Each package 14
27 preferably has a face 62 and the packages 14 are held by the storing rod 48 and the
28 rods 30 of the support structure 28 such that the face 62 of each package is parallel to
29 the X axis. The outside face 60 is utilized when a package 14 is being removed from a
30 rod 30, and the inside face 61 is utilized when a package 14 is being removed from
31 the storing rod 48.

32
33 In an alternative embodiment, the rods 30 extend from the double rod support bar 64
34 in sets of two as shown in Figure 6b. A first rod 65 and a second rod 66 of each set
35 point essentially in the Z direction, but approximately 180 degrees apart from each
36 other. The picking means 22 includes a first end of arm tooling 67 and a second end

1 of arm tooling 68 that picks the medicine packages 14; and a first tooling support
2 structure 70 and a second tooling support structure 72 as shown in Figure 7. Each
3 tooling support structure has at least one column 44 and at least one row 42 to support
4 the column 44 such that the first and the second tooling moves along the respective
5 column 44 and the respective column 44 moves along the respective row 42 of the first
6 and second tooling support structure, respectfully, to pick a given medicine package
7 14 from a corresponding support rod 30, or restock a support rod 30 with an
8 associated medicine package 14.

9
10 In the operation of the preferred embodiment, doctors visit patients in nursing units and
11 write out medication orders for each patient. A patient is typically placed on a certain
12 medication treatment which requires multiple doses of medication over a period of a
13 day. Some medications are administrated at certain times of the day and possibly at
14 intervals of several hours. Patients may also request certain medications on an
15 elective basis for disorders such as headaches. These requests are included in the
16 doctor's order that is sent from the nursing unit to the central pharmacy of the hospital.
17 Once an order is received by the pharmacy, it is checked by registered pharmacists
18 and input into the pharmacy information system. These orders reflect not only orders
19 that are added to a particular patient's treatment but changes in the medication
20 treatment. The pharmacy information system combines this information with the
21 patient's existing medication schedule and develops a patient medication profile. A fill
22 list is generated from that profile. The fill list is a list of all the medications that must be
23 distributed to all patients for the day. This information is sent to the pharmacy printer
24 where a hard copy is generated.

25
26 Means for communication between the pharmacy information system and the
27 Automated Pharmacy Station™ (APS™) exists by either tapping the serial data print
28 stream of the pharmacy information system or by a direct bi-directional communication
29 link. The relevant information concerning the patient including drug type, dosage and
30 frequency is placed in the database of the APS™, see Figure 8. The database of the
31 APS™ contains information about which drugs are to be dispensed that day to the
32 patient and all drugs that have been dispensed in the past to the patient. Information
33 from the pharmacy information system is received on an ongoing basis throughout the
34 day. New information can be entered into the APS™ at any time. In addition to the fill
35 list, new orders and patient admittance, discharge and transfer information are
36 received and stored. A specific prescription for a patient is filled as described in Figure

1 8. Figure 8 is a flow chart with respect to the processing of a patient prescription. The
2 patient box 36 is placed on the conveyor 34. When the turn comes for the patient box
3 36 to be filled, it has been shuttled into a position on the conveyor 34 such that the end
4 of arm tooling 38 can communicate with the box 36 by way of the tooling structure 40
5 as shown in Figure 1. A stationary bar code reader 90 reads the bar code on the
6 patient box 36. The patient identification number is then parsed from the bar code
7 input. This causes the fill list for that particular patient to be retrieved from the APS™
8 database. The fill list is converted to data consisting of locations and number of picks.
9 The data is then downloaded in order for the computer 24 to control the end of arm
10 tooling 38 such that it knows what packages 14 to obtain and place in the patient box
11 36.

12

13 The specific medicine package 14 is picked by the column 44 moving along the row
14 42 until the column 44 has the same X coordinate as the medicine package 14 it
15 desires to obtain. The end of arm tooling 38 then moves along the column 44 to the Y
16 coordinate of the medicine package to be picked. It is also turned to the proper
17 holding means 12 (either the first holding means 12a or the second holding means
18 12b) which has the desired package 14. These actions may also be performed
19 simultaneously by the system. The tooling support structure utilized is a Hauser™
20 HLE linear drive.

21

22 When the end of arm tooling 38 is properly positioned, the suction rod 52 extends in
23 the Z direction by pneumatic cylinder 53 such that the outside suction face 60 contacts
24 the package face 62. The barcode reader 26 reads the identity 16 on the medicine
25 package 14 in order to confirm that it is the proper medicine package to be picked with
26 respect to the patient's prescription. The vacuum valve 54 activates a suction through
27 the air lines 55 such that a suction drawn through the suction face 60 grabs the
28 medicine package 14. When the contact is proper between the suction face 60 and
29 the medicine package 14, the sensing means 58 sends a signal to the valve 59
30 causing the extension rod 52 to retract from the rod 30 of the support structure 28,
31 pulling the medicine package 14 with it. Once the medicine package 14 is clear of the
32 rod 30, the extension rod 52 positions the medicine package 14 that it has obtained,
33 upon the storing rod 48.

34

35 Once the medicine package 14 is on the storing rod 48, the vacuum valve 54
36 terminates the suction and the medicine package is released from the suction face 60.

1 The vacuum valve 57 then activates the cylinder 51 such that the extension rod 52
2 (and cylinder 53) are moved in the Y direction so the bottom of the suction head 56 is
3 above the package 14 on the storing rod 48. The extension rod is then moved forward
4 in the Z direction and downward in the Y direction by the respective valves and
5 cylinders to clear the package and position the suction head 56 for the next pick. The
6 computer 24 then notes that the medicine package 14 with the appropriate medicine
7 has been picked. The process is repeated for all the medicine identified in the
8 patient's prescription until all of the medicine packages 14 needed have been picked.
9
10 The end of arm tooling then positions itself with respect to the row 42 and column 44
11 such that it is over the patient box 36. The end of arm tooling then positions the
12 outside suction face 60 behind the medicine packages on the storing rod 48 that have
13 been collected and strokes forward in the Z direction so that all packages 14 are
14 pushed off the storing rod 48 into the patient box 36.
15
16 More specifically, vacuum valve 57 activates the cylinder 51 to retract in the positive Y
17 direction such that the bottom of the suction head 56 is above the tops of the packages
18 14 on the storing rod 28. Then vacuum valve 59 activates cylinder 53 to retract the
19 extension rod 52 in the negative Z direction such that the outer suction face 60 is
20 behind all of the medicine packages 14 on the storing rod 48. Vacuum valve 57 is
21 then activated such that the suction head 56 is dropped back down in the negative Y
22 direction to be behind the packages 14. Finally, vacuum valve 59 is activated such
23 that the extension rod 52 is extended in the positive Z direction and the front suction
24 face 60 pushes all packages 14 off the storing rod 48 into the patient box 36.
25
26 In the event that the wrong medicine package 14 was scanned and is picked, or the
27 medicine has expired, then the end of arm tooling 30 is moved to an empty portion of
28 the return area, where the medicine package 14 can be disposed. A pharmacy
29 technician will then manually sort the drugs on this rack, removing expired drugs and
30 placing the others in the return rack in order that they might be returned to their correct
31 location in the system. The process is then repeated for the next drug on the
32 prescription list that has not yet been obtained.
33
34 After a patient's prescription is filled and the patient box 36 has all the medicine
35 packages called for in the prescription, a conveyor belt 34 moves the patient box 36 to
36 a check station 80. An operator uses the check station bar code reader 82 to scan the

1 bar code label on the filled patient box 36, see Figure 9. The patient identification
2 number is taken from the inputted bar code and the prescription of the patient is
3 displayed on the check station screen 84 of the check station console 86 connected to
4 the computer or network of computers 24. The operator then scans individual medicine
5 package bar codes in the patient box 36. The identity of the medicine packages 14 in
6 the patient box 36 are automatically checked for correctness with respect to the patient
7 list on the station screen 84. If the medicine packages 14 in the box 36 are correct,
8 then the patient box is allowed to continue on towards the ultimate destination and the
9 next filled patient box 36 is then checked. If the medicine packages 14 in the patient
10 box 36 are not correct, then it is determined whether the error, whatever that may be,
11 can be corrected. If it can, then the record on the check station screen 84 is corrected
12 and the procedure for verifying correctness is then repeated. If the problem cannot be
13 corrected, then the patient box 36 is dumped and the computer is notified that the
14 patient's prescription has not yet been filled.

15
16 With respect to the return process, see Figure 10, the patient box 36 is first removed
17 from a cassette returned from a nursing unit. An operator uses the return station
18 barcode scanner 91 on the return station 92 to scan the bar code on the patient box
19 36. The nursing unit number and the patient identification number is then parsed from
20 the inputted bar code of the patient box 36. The APS™ database is then accessed
21 and the patient dispensing record is retrieved. On the return screen 94, there is
22 displayed for a particular patient at the operator console 96, a list of the medicines
23 ordered and dispensed to the patient. The operator of the return station 92 then scans
24 the identity 16 of the medicine in the patient's box 36 with the return station bar code
25 scanner 91. The medicine packages 14 that are found thereon are verified as being
26 dispensed to the patients. The expiration date of the medicine in the medicine
27 package 14 is then determined. If the expiration date of a medicine in the medicine
28 package 14 has passed, then the medicine package 14 is discarded. If the expiration
29 date has not passed then the returned medicine package 14 is placed in the return
30 rack 20. If there is more medicine to be returned, the process is then repeated. If there
31 is no more medicine in the patient box 36 to return, then the return station console 96
32 is checked to verify the correctness of the medicine returned. If the screen is correct,
33 then the return record is accepted and the APS™ database is updated. If the screen
34 94 is incorrect, then the screen is corrected to correspond to the returned medicine
35 packages 14 and the patient box 36.
36

1 The APS™ data base is then accessed in order to retrieve the patient numbers and
2 locations transferred or admitted to the nursing unit. If a new patient has been
3 transferred into that particular hospital bed, the system generates a barcode
4 containing his/her patient identification number. This label is placed on the patient box
5 to reflect the present patient in that hospital bed.

6
7 If there are more patient boxes 36 in the cassette, then the bar code on the next patient
8 box 36 is scanned and the return process continues as described above. This process
9 is repeated for each cassette returned from the patient floor.

10
11 When medicine packages 14 are to be restocked to the structure 28, see Figure 11,
12 the return rack is placed in a predetermined position alongside the structure 28. By
13 being placed in a predetermined position, the rods X and Y coordinates are known to
14 the computer 24. The end of arm tooling 38 is then positioned for a given rod in the
15 return rack. The bar code reader 26 on the end of arm tooling 38 then scans the
16 identity 16 of the medicine package 14 that is about to be picked by the end of arm
17 tooling 38. The process of picking the medicine packages 14 onto the storing rod 48
18 of the end of arm tooling 38 is the same as identified above with respect to the process
19 of obtaining medicine packages 14 from the support structure 28. The only difference
20 is that the order of the medicine packages 14 and their identity as they are picked is
21 saved in the computer 24. When the storing rod 48 is then moved to the support
22 structure 28, in order to restock rods 30 therein, the computer knows the identity of the
23 respective medicine package 14 on the storing rod 48 which is about to be placed
24 back onto the corresponding rod 30 of support structure 28.

25
26 The placement of the package 14 from the storing rod 48 to the storage rod 30 of the
27 support structure 28 occurs in the following manner. The extension rod 52 is retracted
28 in the negative Z direction such that the inside suction face 61 is in contact with the
29 medicine package 14. The sensing means 58 determines whether proper contact is
30 made. Then the extension rod 52 is moved a predetermined distance in the positive Z
31 direction to place the medicine package over a rod 30 of support structure 28.
32 Vacuum valve 54 is then deactivated to stop suction, allowing the medicine package
33 14 on the suction face 61 to drop away therefrom. The extension rod 52 then moves in
34 the negative Z direction towards the medicine packages 14 on the storing rod 48 again
35 to repeat the process. While it moves back to obtain another medicine package 14,
36 the sensor 58 trips when contact is made. The process can be repeated until there are

1 no more medicine packages 14 on the storing rod 48. The computer 24 knows when
2 to stop returning packages since it knew how many packages were placed on the
3 storing rod 48 to begin with.

4

5 The restocking of the support structure 28 can be carried out during the evening when
6 the medicine is not being gathered by the end of arm tooling 38. Alternatively,
7 restocking can be carried out simultaneously with picking if the system 10 has a pair of
8 rods as shown in Figure 6b, a first end of arm tooling 67, second end of arm tooling 68
9 and a first tooling structure 70 and a second tooling structure 72 is utilized, as shown
10 in Figure 7. While, for instance, the first end of arm tooling 67 is picking medicine
11 packages 14 to fill a patient's prescription, the second end of arm tooling 68 can be
12 restocking the second side of the storage area 12.

13

14 Although the invention has been described in detail in the foregoing embodiments for
15 the purpose of illustration, it is to be understood that such detail is solely for that
16 purpose and that variations can be made therein by those skilled in the art without
17 departing from the spirit and scope of the invention except as it may be described by
18 the following claims.

WHAT IS CLAIMED IS:

1. A system for filling orders comprising:

means for holding packages, each package having the same type of contents being held at a predetermined location by the holding means, said holding means having a plurality of predetermined locations corresponding to a plurality of different types of contents;

means for supplying packages to the holding means; and

means for picking a package from the holding means that is identified in the order, or from the supplying means for the purpose of restocking the holding means, said picking means in communication with the holding means and supplying means.

2. A system for filling prescriptions for patients comprising:

means for holding packages, each medicine package having an identity which defines the medicine therein, each package that has the same medicine being held at a predetermined location by the holding means, said holding means having a plurality of predetermined locations corresponding to a plurality of different medicines;

means for supplying medicine packages to the holding means; and

means for picking a medicine package from the holding means that is identified in a patient's prescription in order to fill the prescription, or from the supplying means in order to restock the holding means, said picking means in communication with holding means and the supplying means.

3. A system for filling prescriptions for patients comprising:

means for holding medicine packages, each package having a single dosage of medicine, each medicine package having an identity which defines the dosage and medicine therein, each package that has the same medicine being held at a predetermined location by the holding means, said holding means having a plurality of predetermined locations corresponding to a plurality of different medicines;

means for supplying medicine packages to the holding means;

means for picking a medicine package from the holding means that is identified in a patient's prescription in order to fill the prescription, or from the supplying means in order to restock the holding means, said picking means in communication with the holding means and the supplying means.

4. A system as described in Claim 3 wherein the picking means includes a computer having a database, said database having a prescription to be filled, and the predetermined locations of each different medicine in the holding means, said computer guiding said picking means with said database such that the picking means picks a medicine package according to the prescription to be filled.

5. A system as described in Claim 4 wherein said picking means includes means for determining the identity of a medicine package in the supplying means and providing its identity to the computer, said computer guiding said picking means such that the holding means is restocked with the identified medicine package from the supplying means according to

the medicine in the medicine package and its predetermined location in the holding means that is known by the computer.

Sub 17 6. A system as described in Claim 5 wherein the holding means includes a structure; and support rods held by the structure, said rods holding the medicine packages, each rod associated with a given medicine and holding medicine packages with only the same medicine.

a ²
holding means ⁷ 7. A system as described in Claim ¹ 6 wherein the ~~structure~~ includes a plurality of back rod supports from which the rods extend, said structure with back rod supports form an X,Y coordinate system with each rod and medicine packages therein having a unique X and Y coordinate, said picking means disposed adjacent said structure such that a given medicine package on an associated rod can be picked by the picking means to fill a patient's prescription; or a given medicine package in the supplying means can be picked by the picking means to restock an associated rod.

³ ~~8~~ 8. A system as described in Claim ² 7 including a conveyer in communication with the picking means; and patient prescription boxes which are moved by the conveyer to the picking means such that the picking means provides the medicine packages it has picked to fill a given prescription to an associated box.

⁴ ~~9~~ 9. A system as described in Claim ³ 8 wherein the picking means includes at least one end of arm tooling that picks the medicine packages; and a tooling support structure having at least one column to support the tooling and at least one row to support the column such that the tooling moves along the column as the column moves along the row to pick a given medicine package hanging from a corresponding support rod, or restock a given medicine package on a corresponding support rod; and means

for moving the column with respect to the row, said moving means controlled by the computer.

⁵10. A system as described in Claim ⁴9 wherein the tooling is comprised of:

a housing;

means for storing medicine packages attached to the housing;

means for obtaining a medicine package, said obtaining means slidably attached to the housing such that it can move in a Z direction, which is perpendicular to the X and Y direction, to pick a medicine package from a support rod in the support structure when the housing is adjacent to and aligned with a support rod, and can move in the Z direction to place a picked package on the storing means; and

wherein the identifying means is part of the end of arm tooling such that it can identify a package to be picked by the obtaining means, each of said packages having an identity disposed on them which can be read by the identifying means.

⁶11. A system as described in Claim ⁵10 wherein the identity on each package is a bar code, and the identifying means includes a bar code reader disposed on the obtaining means.

⁷12. A system as described in Claim ⁶11 wherein the obtaining means includes means for producing a suction; a suction rod in fluidic connection with the suction producing means, said suction rod slidably attached with respect to the Y and Z directions to the housing and maintaining a suction therethrough when the suction producing means is activated;

a suction head connected to the suction rod through which a medicine package is picked with suction; and means for sensing when a package is properly positioned on the suction head such that the suction rod is then moved to the storing means and deposits the package thereon.

⁶13. A system as described in Claim ⁷~~12~~ wherein the storing means is a storing rod which extends from the housing such that the suction head and the suction rod can deposit a package thereon.

⁹14. A system as described in Claim ⁸~~13~~ wherein the tooling includes valves and pneumatic cylinders for moving the suction rod in the Y and Z direction; and a vacuum pump for providing suction to the suction rod and suction head sufficient to pick a package from a rod of the support structure and then hold it to the suction head.

¹⁰15. A system as described in Claim ⁹~~14~~ wherein the suction head has two faces through which a suction can be drawn, each face capable of picking a package.

¹¹16. A system as described in Claim ¹⁰~~15~~ wherein the two faces are parallel to each other and are parallel to the x-axis, and wherein each package has a face and the packages are held by the storing rod and the rods of the support structure such that the face of each package is parallel to the x-axis.

¹²17. A system as described in Claim ³~~16~~ wherein the rods extend from the back rod supports in sets of two, with a first rod and a second rod of each set pointing essentially in a Z direction, which is perpendicular to the X and Y directions, but approximately 180° apart from each other, and wherein the picking means includes a first and a second end of arm tooling that picks

the medicine packages; and a first and a second tooling support structure, each tooling support structure having at least one column and at least one row to support the column, such that the first and the second tooling moves along the respective column and the respective column moves along the respective row of the first and second tooling support structure, respectively, to pick a given medicine package from a corresponding support rod, or restock a support rod with an associated medicine package.

18. A system as described in Claim 1 wherein each package has an identity which defines the contents therein.

19. A system for filling orders comprising:

means for holding packages, each package having the same type of contents being held at a predetermined location by the holding means, each package having an identity which defines the contents therein, said holding means having a plurality of predetermined locations corresponding to a plurality of different type of contents; and

means for picking a package from the holding means that is identified in the order, said picking means in communication with the holding means.

20. A system for filling orders comprising:

first means for holding packages, and second means for holding packages, each package having the same type of contents being held at a predetermined location by the first and second holding means, said first and second holding means having a plurality of predetermined locations corresponding to a plurality of different types of contents; and

means for picking a package from the first or second holding means that is identified in the order, said picking means disposed between and in communication with the first and second holding means.

21. A system as described in Claim 20 wherein each holding means includes a structure; and support rods held by the structure, said rods holding the packages, each rod associated with a given package.

a 1322. A system as described in Claim ~~21~~¹⁶ wherein the picking means includes at least one end of arm tooling that picks the packages; and a tooling support structure having at least one column to support the tooling and at least one row to support the column such that the tooling moves along the column as the column moves along the row to pick a given package hanging from a corresponding support rod, said end of arm tooling able to turn on the column to pick packages on either the first or second holding means; and

means for moving the column with respect to the row, said moving means controlled by a computer and in communication therewith.

23. An end of arm tooling comprising:

a housing;

means for storing packages attached to the housing;

means for obtaining a package, said obtaining means slidably attached to the housing such that it can move to pick a package from a support rod in a support structure when the housing is adjacent to and aligned with a support rod, and then move to place a picked package on the storing means; and

means for identifying a package to be obtained by the
obtaining means, said identifying means connected to the housing.

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ABSTRACT OF THE DISCLOSURE

A SYSTEM FOR FILLING ORDERS

A system for filling orders, such as prescriptions for patients, comprising a device for holding packages. Each package has the same type of contents being held in a predetermined location by the holding device. Each package has an identity which defines the contents therein. The holding device has a plurality of predetermined locations corresponding to a plurality of different types of contents. Additionally, the system is comprised of a device for supplying packages to the holding device. Also, there is a device for picking a package from the holding device that is identified in the order for the purpose of filling the order, or from the supplying device for the purpose of restocking the holding device. The picking device is in communication with the holding device and supplying device. In a preferred embodiment, the contents of each package is a single dosage of medicine.

**PATENT**Attorney's Docket No. 1797.003Applicant or Patentee: Sean C. McDonald, et al.

Serial or Patent No.: 0 / _____

Filed or issued: _____

For: A SYSTEM FOR FILLING ORDERS**VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS (37 CFR 1.9(f) and 1.27(c))—SMALL BUSINESS CONCERN**

I hereby declare that I am

- ☐ the owner of the small business concern identified below:
- ☒ an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF CONCERN Automated Healthcare, Inc.ADDRESS OF CONCERN Suite 211, 3920 Old William Penn Highway,
Pittsburgh, PA 15235

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR 121.3-18, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees under Section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third-party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed, to and remain with the small business concern identified above with regard to the invention, entitled

A SYSTEM FOR FILLING ORDERSby inventor(s) Sean C. McDonald, Ellen J. Hertz, James A. Smith
Gregory Toto

described in

- ☒ the specification filed herewith.
- ☐ application serial no. 0 / _____, filed _____.
- ☐ patent no. _____, issued _____.

If the rights held by the above identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who could not qualify as a small business concern under 37 CFR 1.9(d) or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

*NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27).

NAME _____

ADDRESS _____

☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

NAME _____

ADDRESS _____

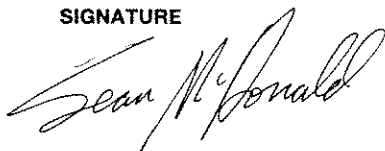
☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small business entity is no longer appropriate. (37 CFR 1.28(b)).

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING Sean C. McDonaldTITLE OF PERSON OTHER THAN OWNER PresidentADDRESS OF PERSON SIGNING Automated Healthcare, Inc.Suite 211, 3920 Old William Penn Highway, Pittsburgh, PA 15235

SIGNATURE



Date

1/17/90

Page 1 of 2

Declaration and Power of Attorney For Patent Application

English Language Declaration

As a below named inventor, I hereby declare that

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

A SYSTEM FOR FILLING ORDERS

the specification of which

(check one)

☒ is attached hereto.

☐ was filed on _____ as

Application Serial No. 0 /

and was amended on _____
(if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)

Priority Claimed

(Number) _____ (Country) _____ (Day/Month/Year Filed) _____

☐ Yes ☐ No

(Number) _____ (Country) _____ (Day/Month/Year Filed) _____

☐ Yes ☐ No

(Number) _____ (Country) _____ (Day/Month/Year Filed) _____

☐ Yes ☐ No

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

Form PTO-FB-110 (8-83)

Patent and Trademark Office-U.S. DEPARTMENT OF COMMERCE

Page 2 of 2

0 / _____
 (Application Serial No.) (Filing Date) (Status)
 (patented, pending, abandoned)

0 / _____
 (Application Serial No.) (Filing Date) (Status)
 (patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

POWER OF ATTORNEY. As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith (list name and registration number)

Andrew J. Cornelius, Reg. No. 29,142; Ansel M. Schwartz, Reg. No. 30,587

Send Correspondence to:

Ansel M. Schwartz, Esquire 412/394-4987

Direct Telephone Calls to (name and telephone number)

Full name of sole or first inventor
 Sean C. McDonald 1/17/90
 Inventor's signature
 Residence 582 East End Avenue, Pittsburgh, PA 15221 USA
 Citizenship United States
 Post Office Address 582 East End Avenue, Pittsburgh, PA 15221 USA

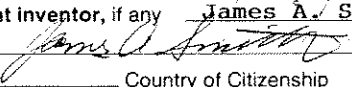
Full name of second joint inventor, if any
 Ellen J. Hertz 1/17/90
 Second joint inventor's signature
 Residence 5446 Wilkins Avenue, Pittsburgh, PA 15217 USA
 Citizenship United States
 Post Office Address 5446 Wilkins Avenue, Pittsburgh, PA 15217 USA

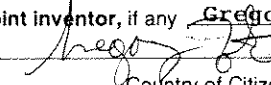
(Supply similar information and signature for third and subsequent joint inventors.)

Form PTO-FB-110 (8-83)

Patent and Trademark Office-U.S. DEPARTMENT OF COMMERCE

**ADDED PAGE TO COMBINED DECLARATION AND POWER OF ATTORNEY
FOR SIGNATURE BY THIRD AND SUBSEQUENT INVENTORS**

Full name of **third joint inventor**, if any James A. Smith
Inventor's signature  1/17/90
Date _____ Country of Citizenship United States
Residence 3909 Ash Drive, Allison Park, PA 15101
Post Office Address 3909 Ash Drive, Allison Park, PA 15101

Full name of **fourth joint inventor**, if any Gregory Toto
Inventor's signature  1/17/90
Date _____ Country of Citizenship United States
Residence 110 Inglewood Drive, Pittsburgh, PA 15228
Post Office Address 110 Inglewood Drive, Pittsburgh, PA 15228

Full name of **fifth joint inventor**, if any _____
Inventor's signature _____
Date _____ Country of Citizenship _____
Residence _____
Post Office Address _____

(Added Page to Combined Declaration and Power of Attorney for Signature by Third and
Subsequent Inventors [1-2])

07/469217

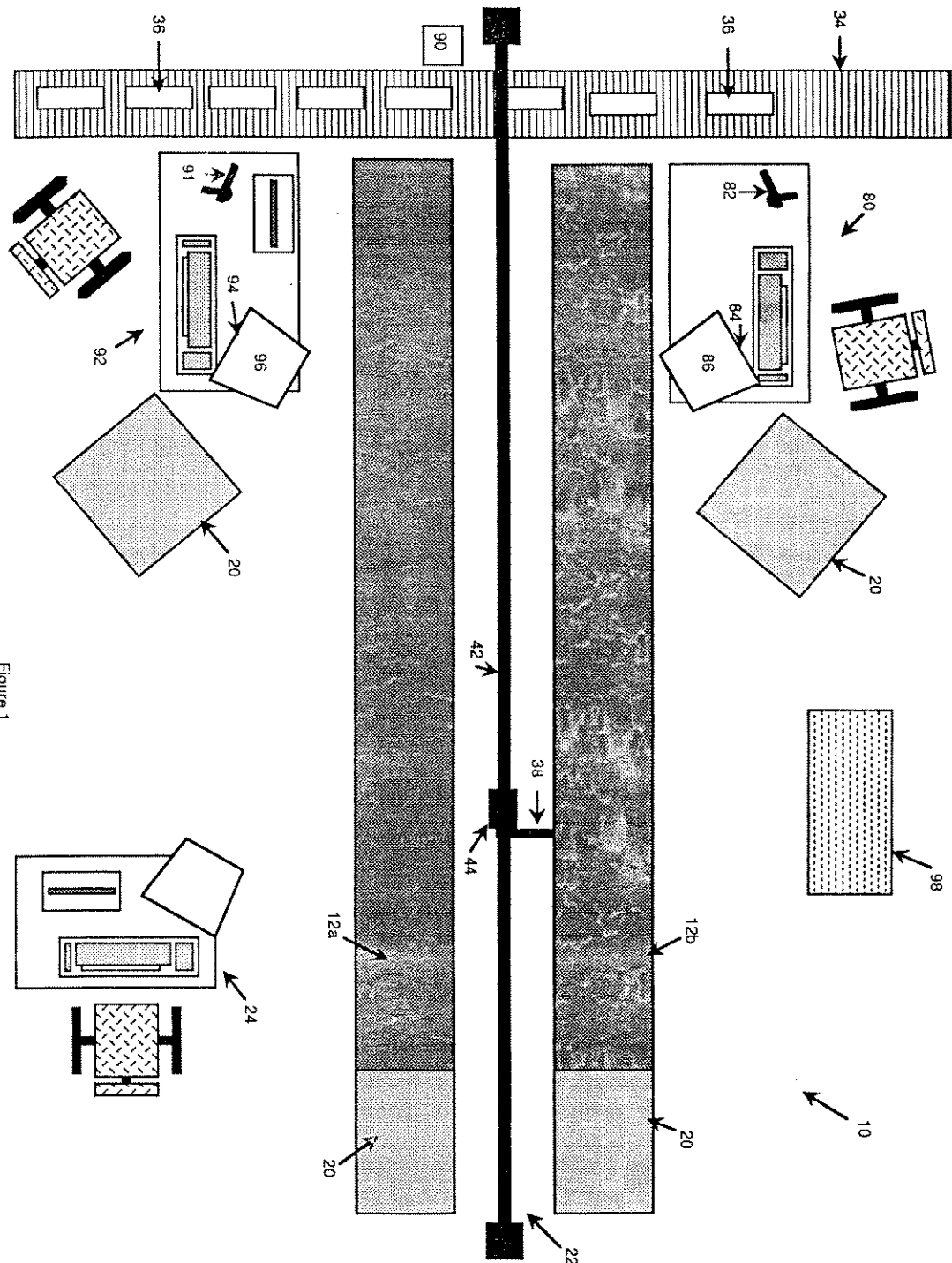


Figure 1

07/469217

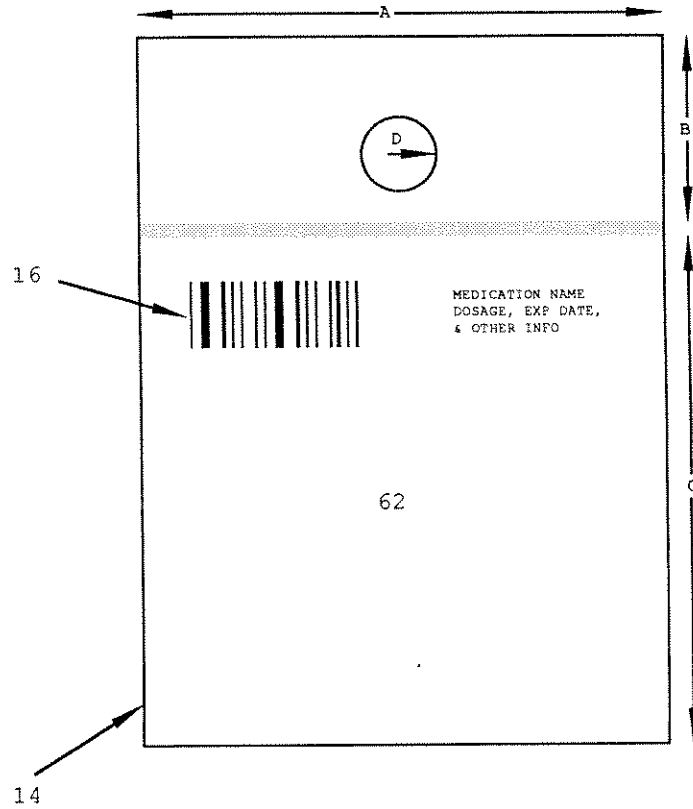


Figure 2

07/469217

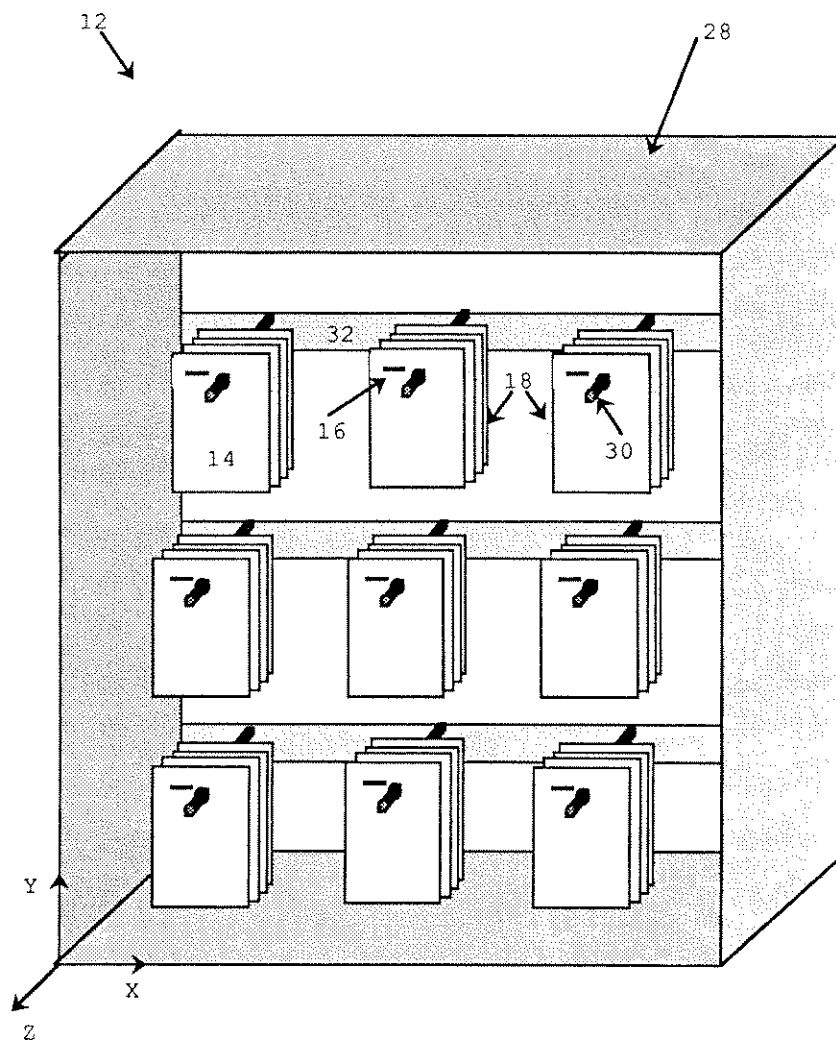


Figure 3

07/469217

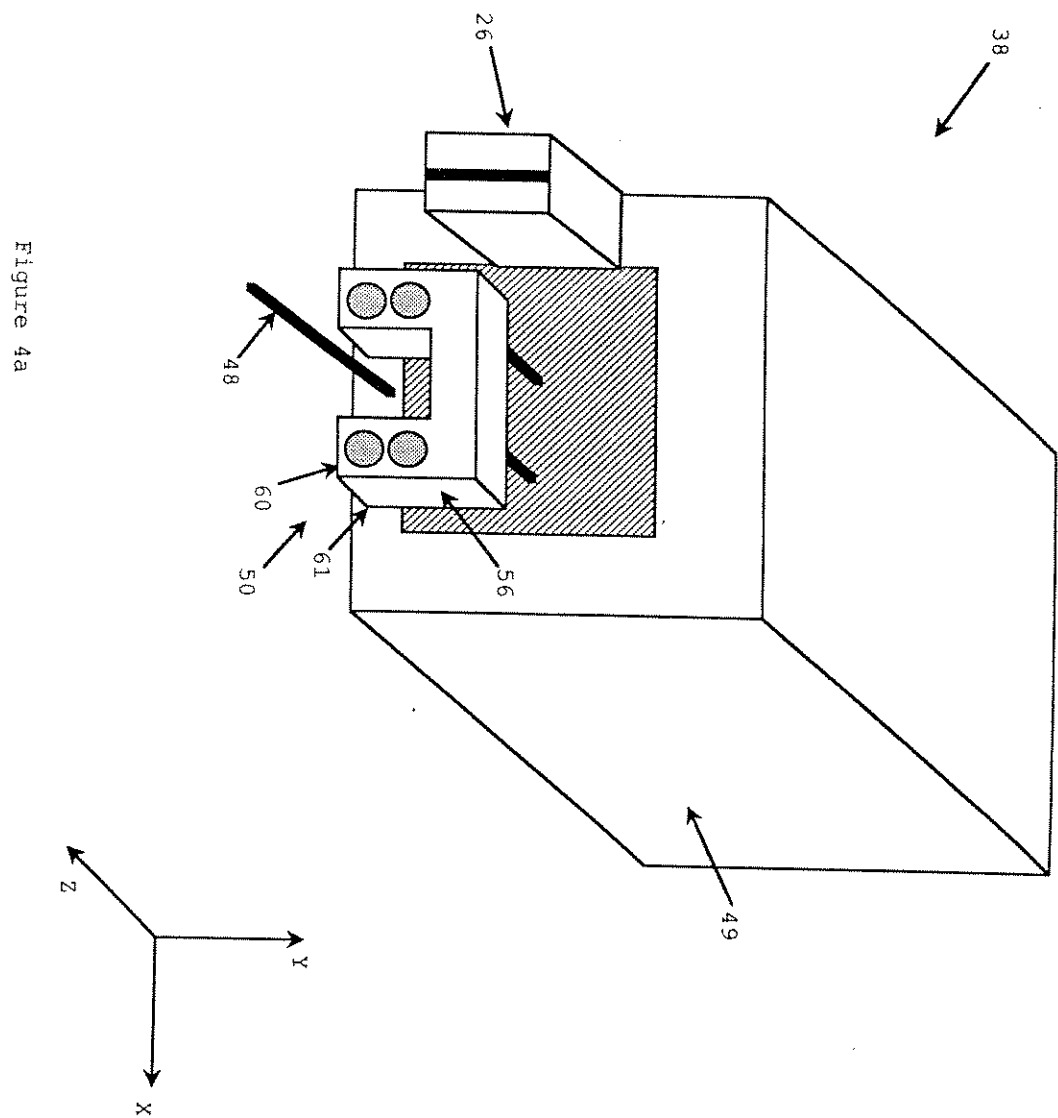


Figure 4a

07/469217

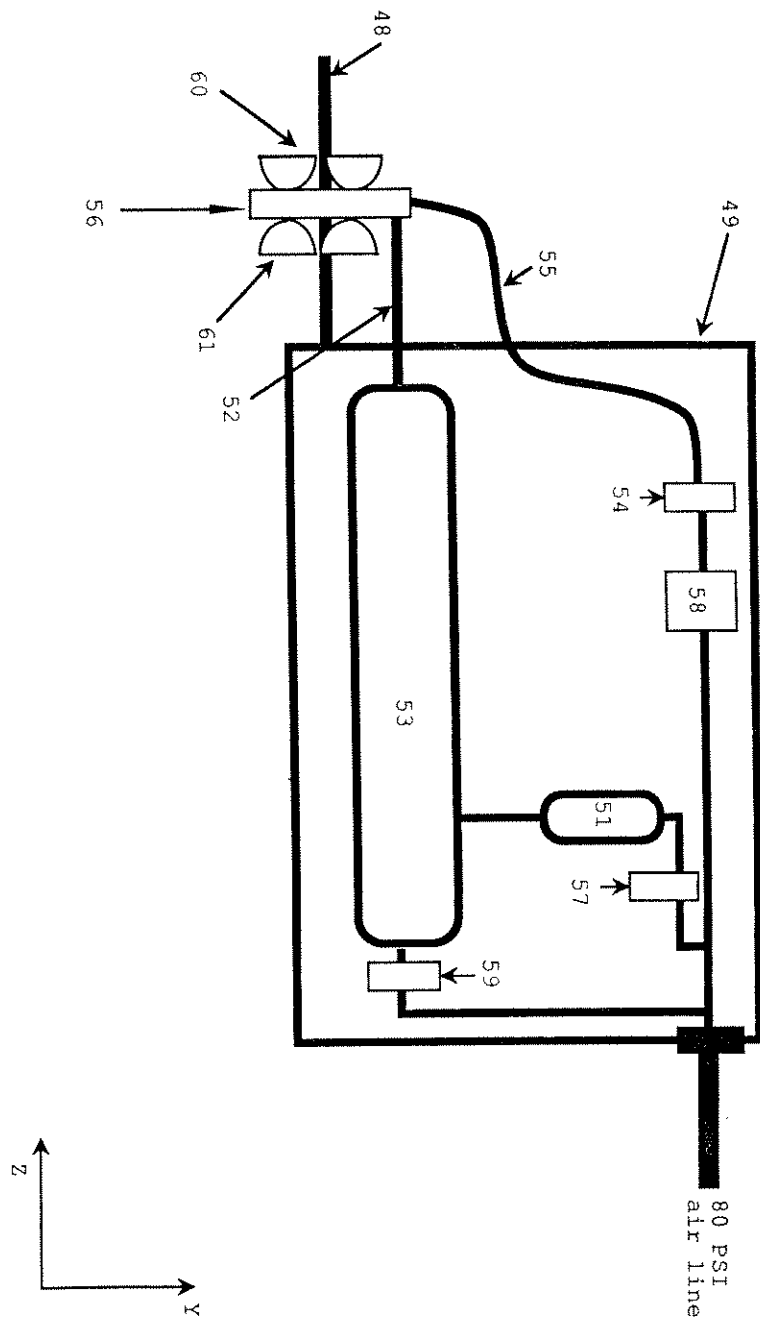


Figure 4b

07/469217

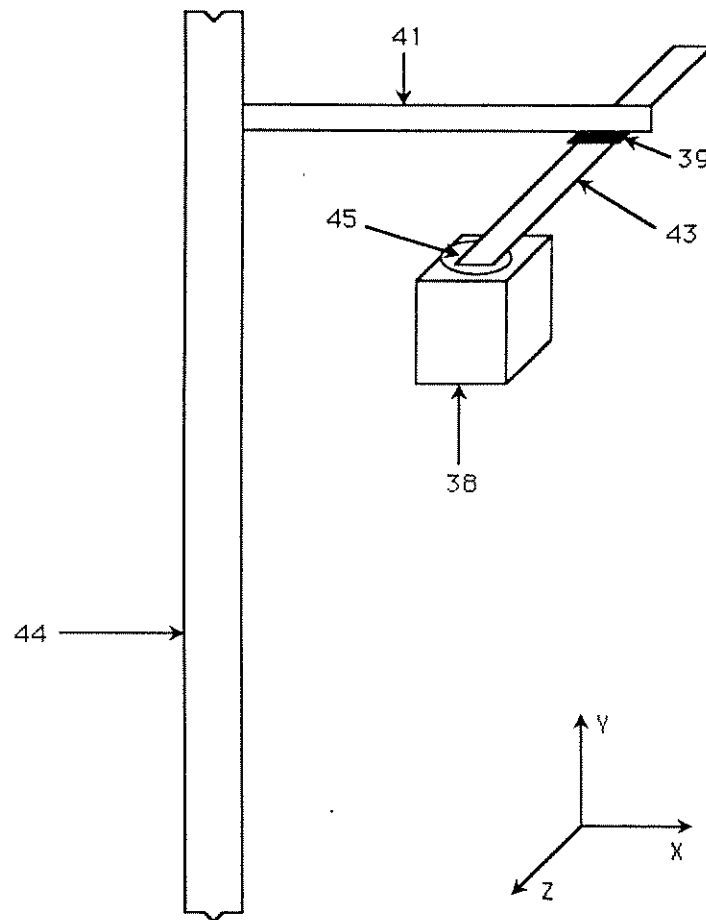


Figure 4c

07/469217

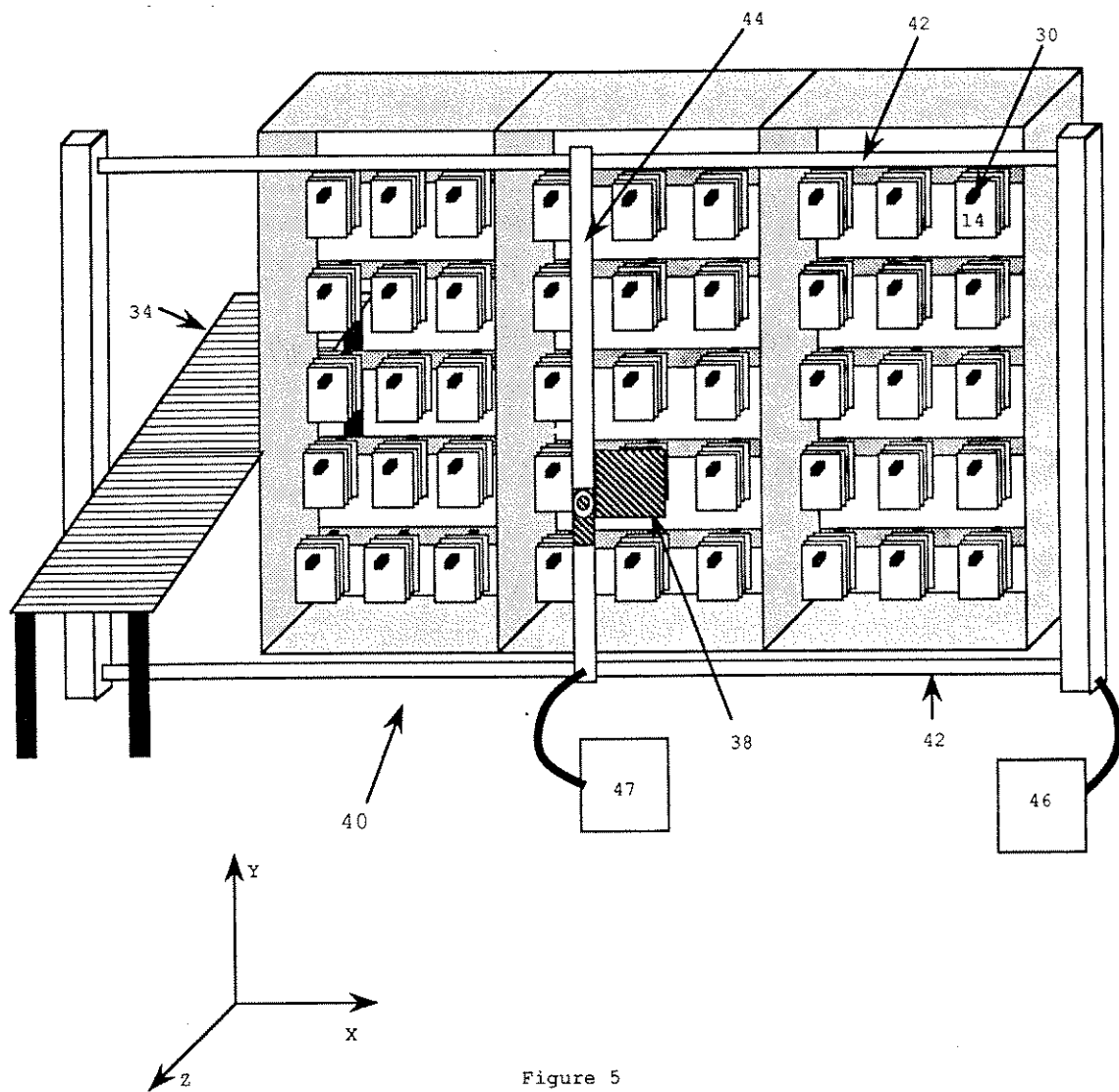


Figure 5

07/469217

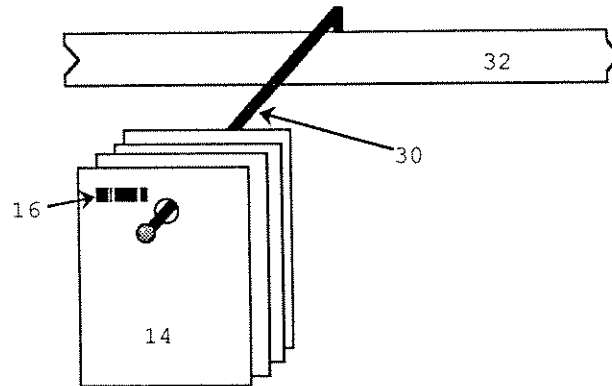


Figure 6A

07/469217

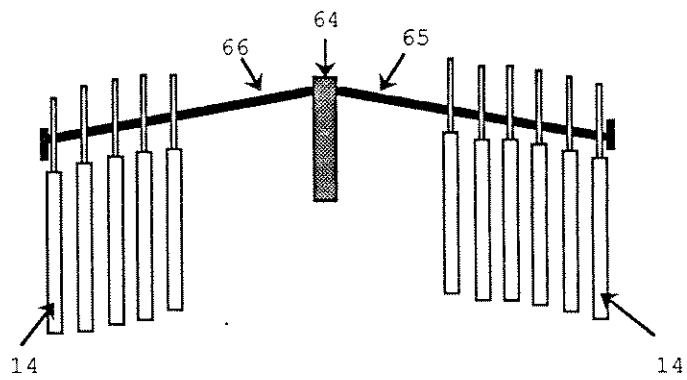


Figure 6B

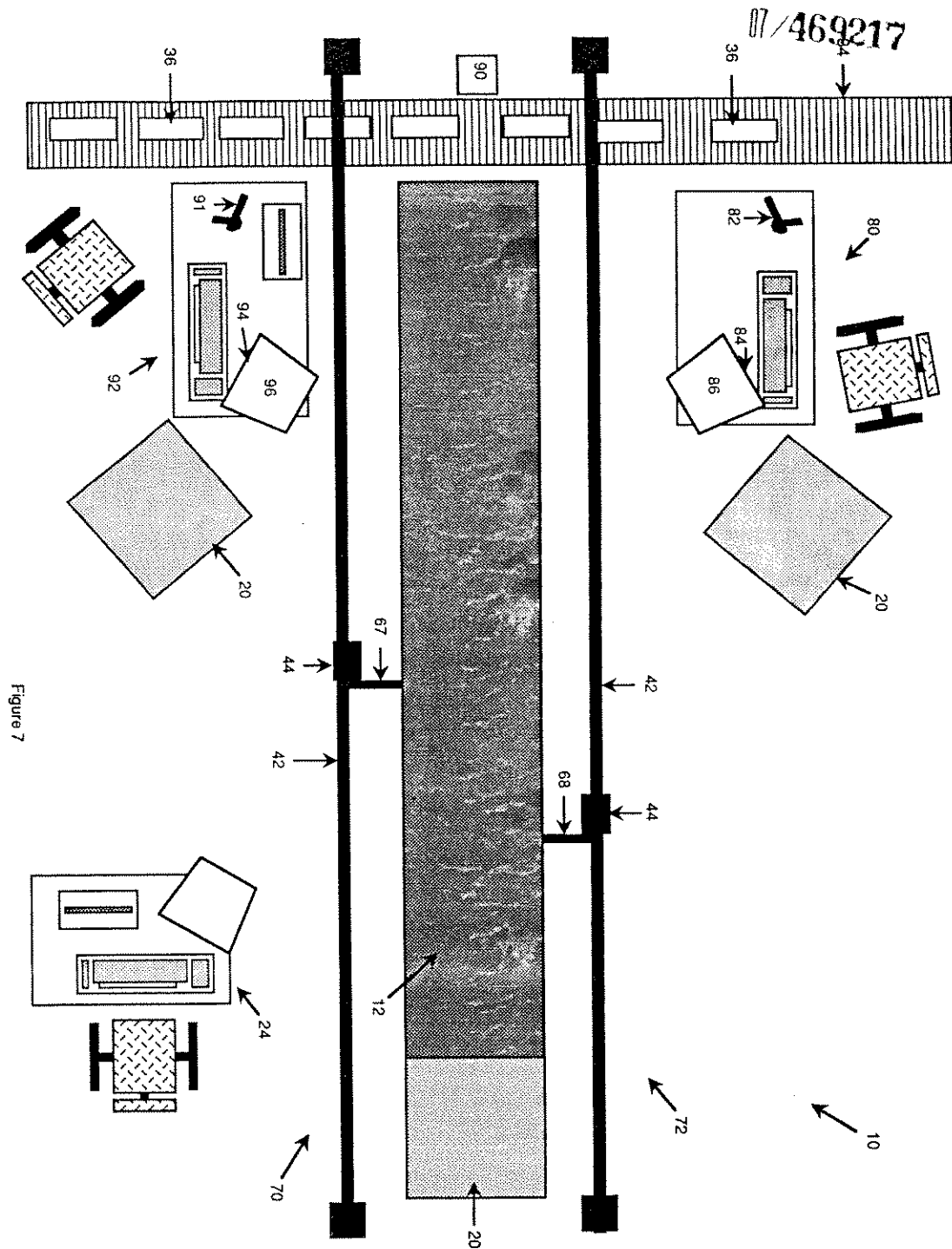


Figure 7

PROCESS A PATIENT ORDER

07/469217

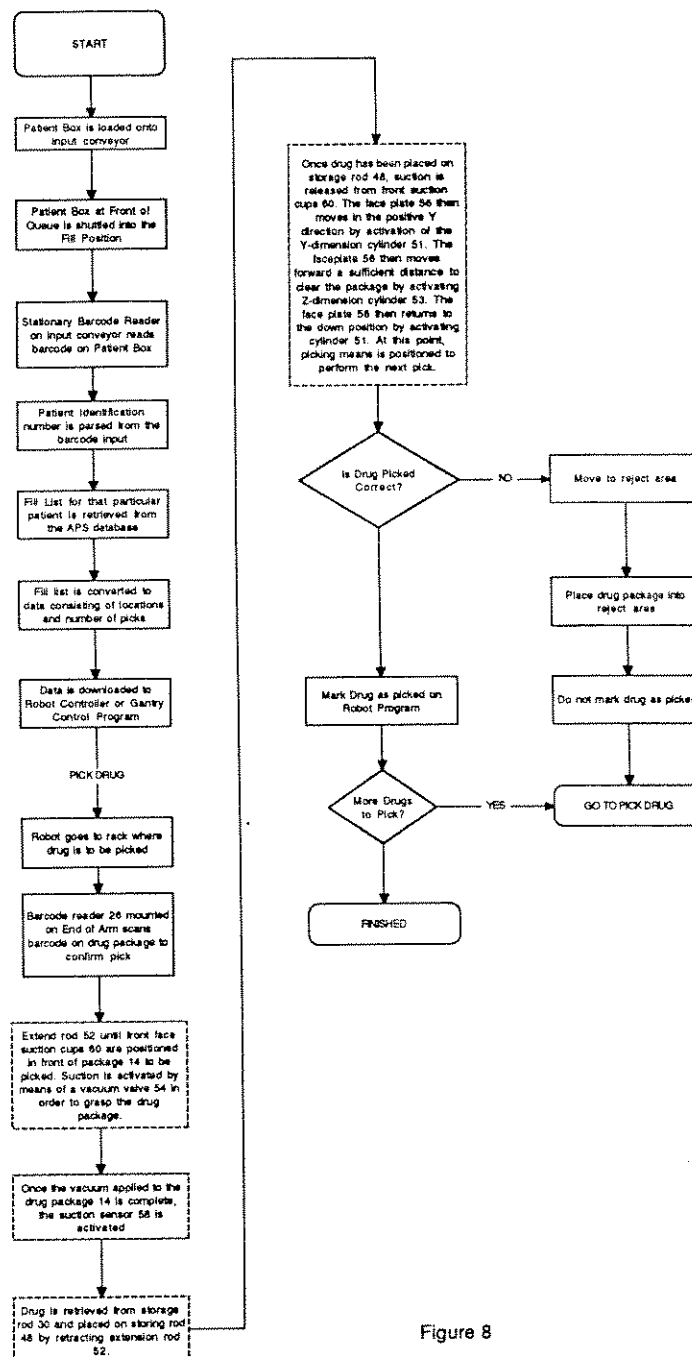


Figure 8

DETAILED CHECK STATION

07/469217

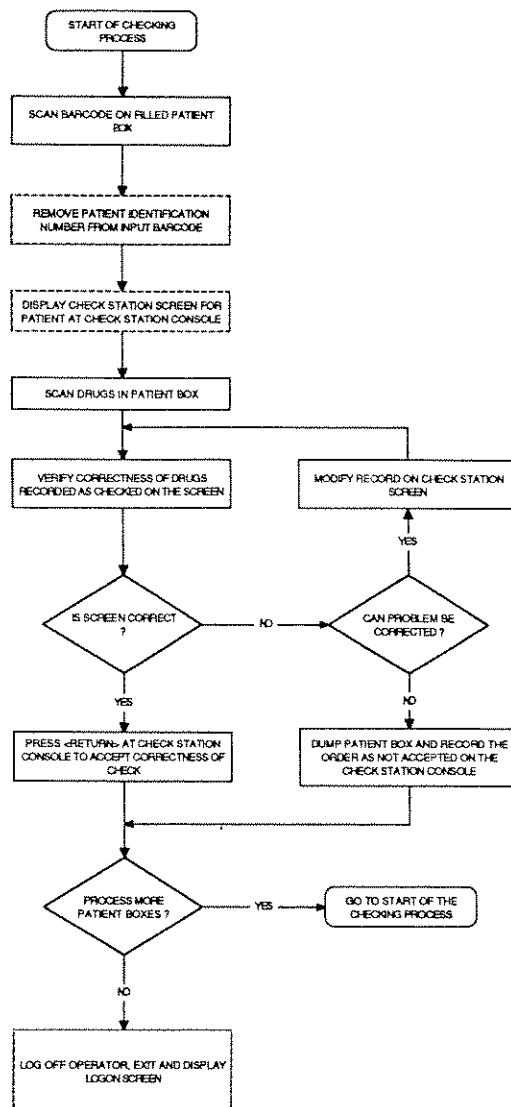


Figure 9

DETAILED RETURN STATION

07/469217

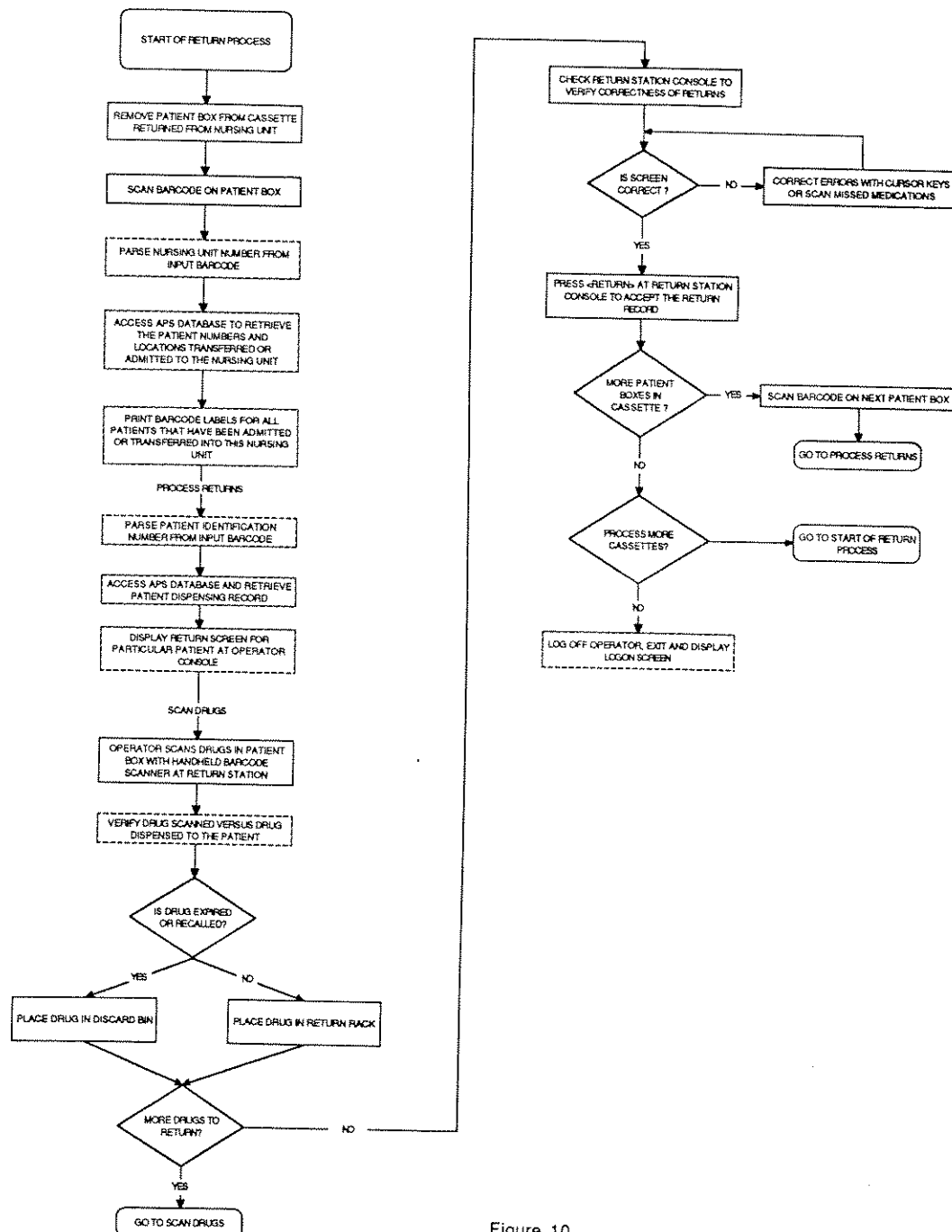


Figure 10

DETAILED RETURN DRUGS TO Bin

07/469217

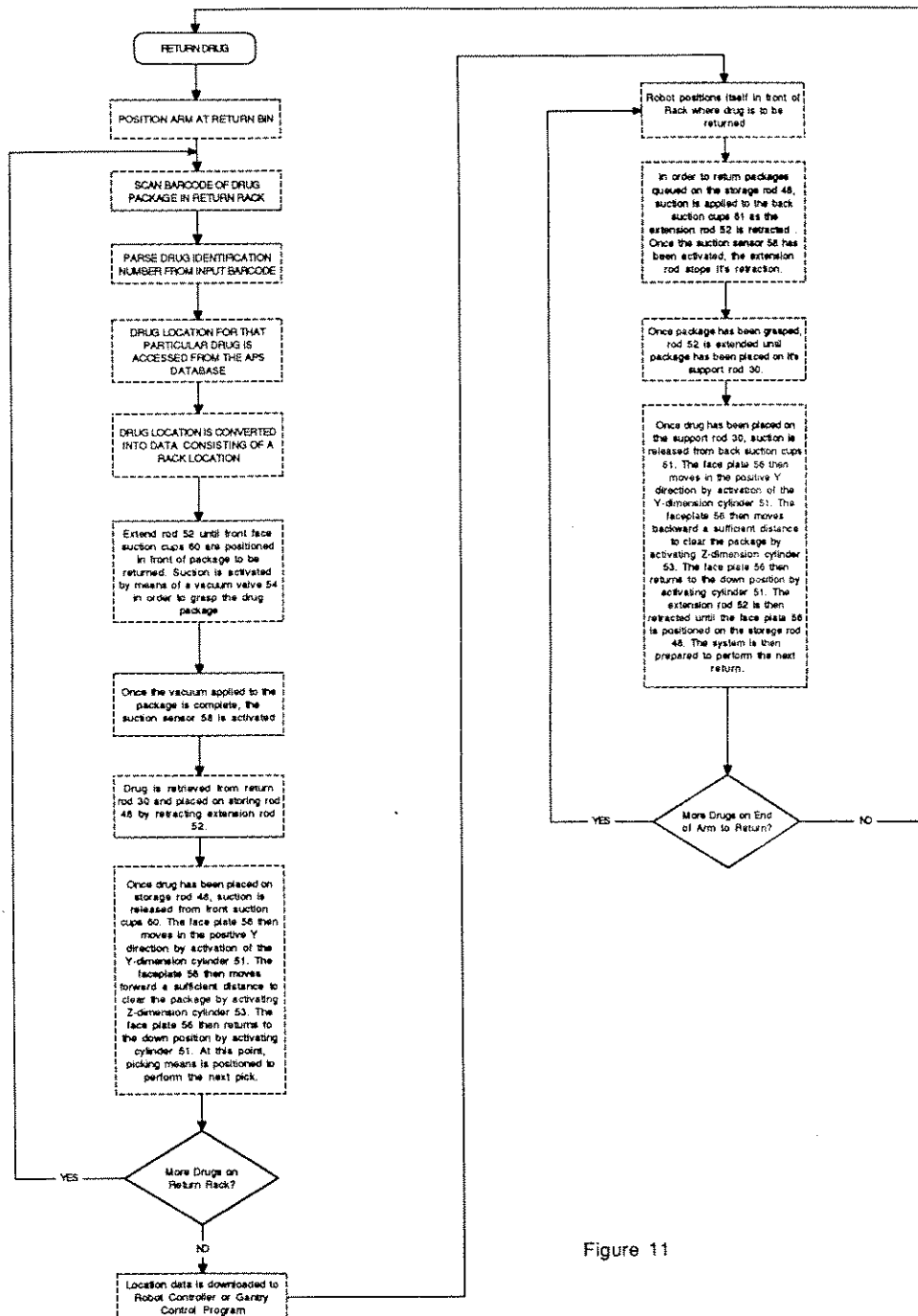


Figure 11

Print Of Drawing
As Original Filed

07/469217

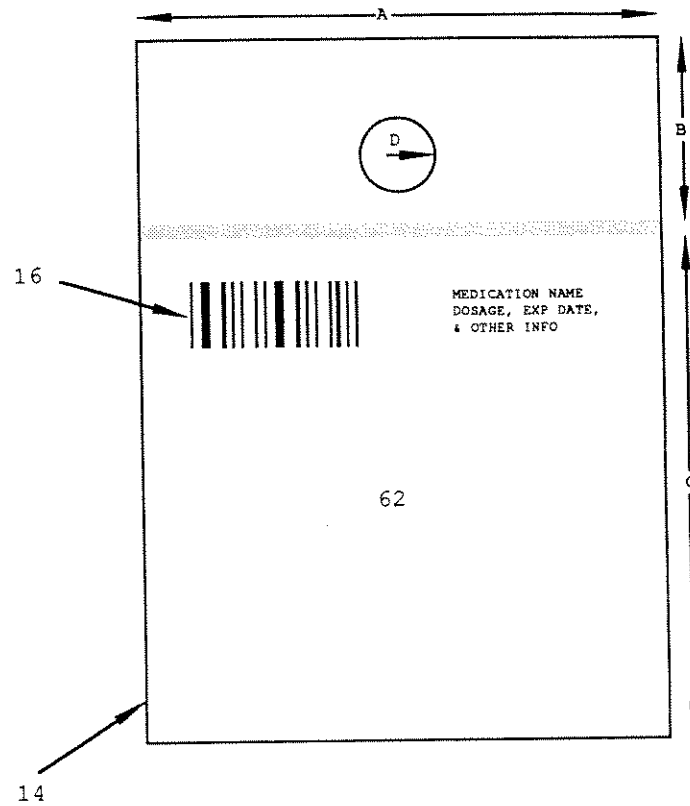


Figure 2

Print Of Drawing
As Original Filed

07/469217

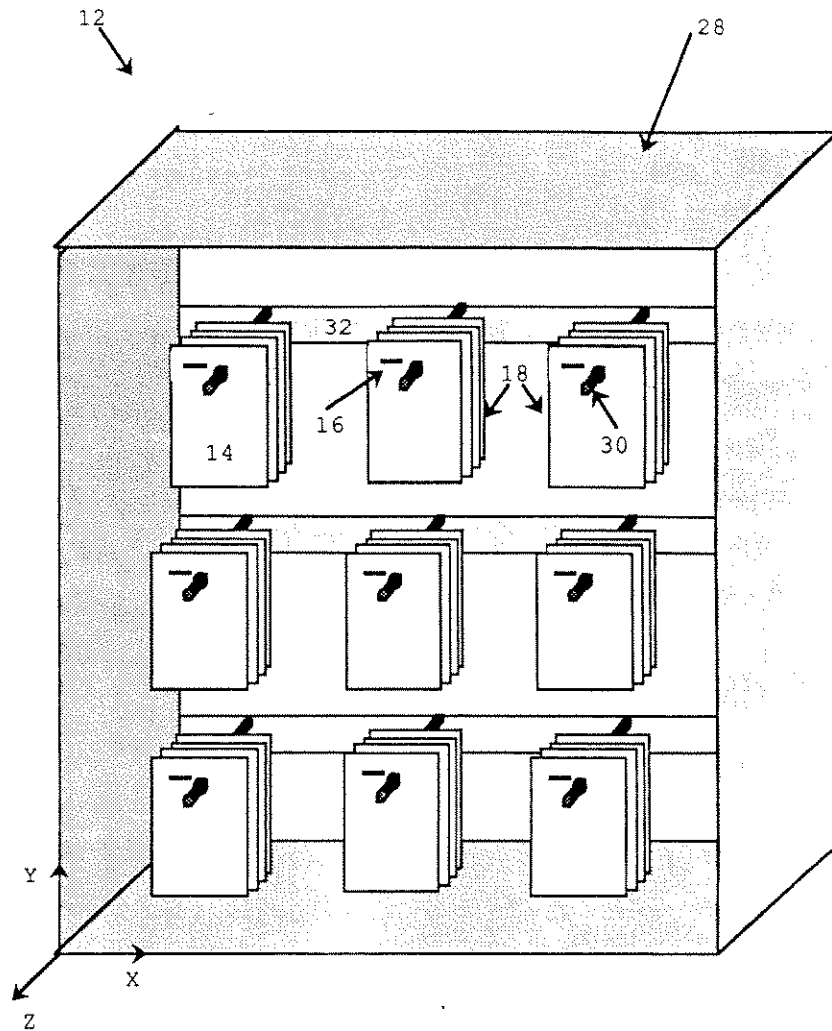
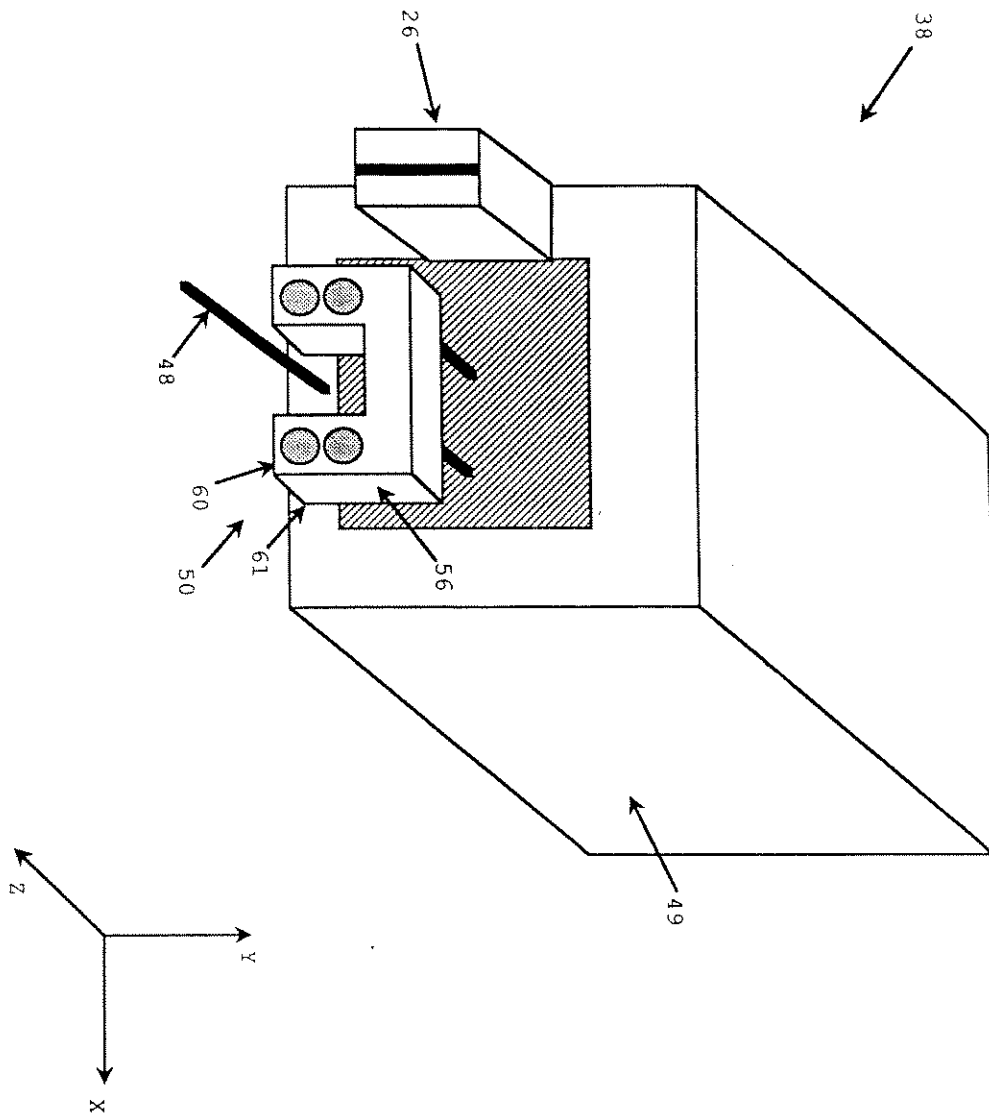


Figure 3

Print Of Drawing
As Original Filed

07/469217

Figure 4a



Print Of Drawing
As Original Filed

07/469217

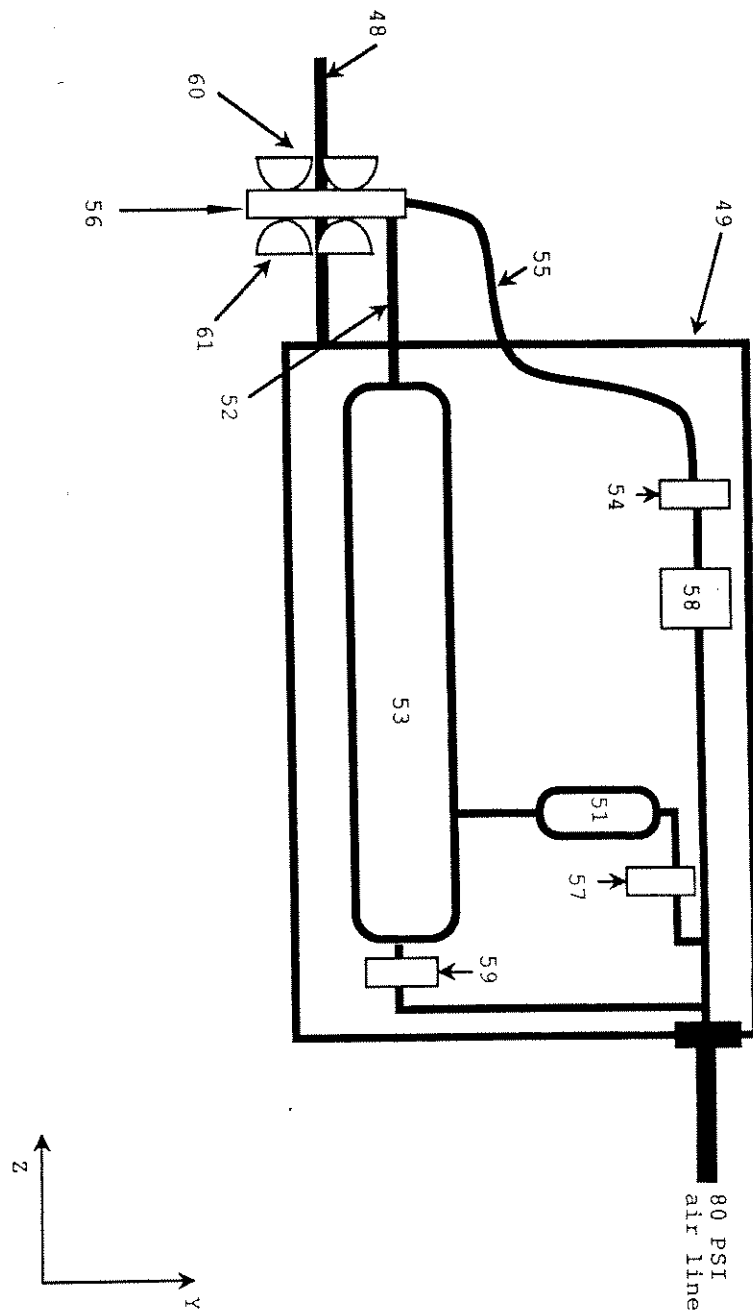


Figure 4b

Print Of Drawing
As Original Filed

07/469217

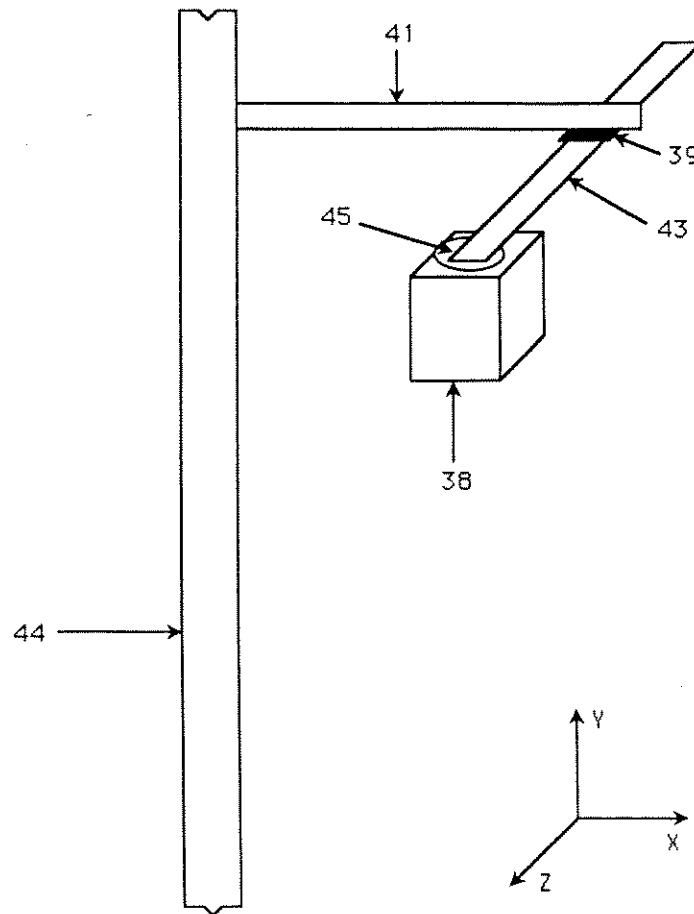
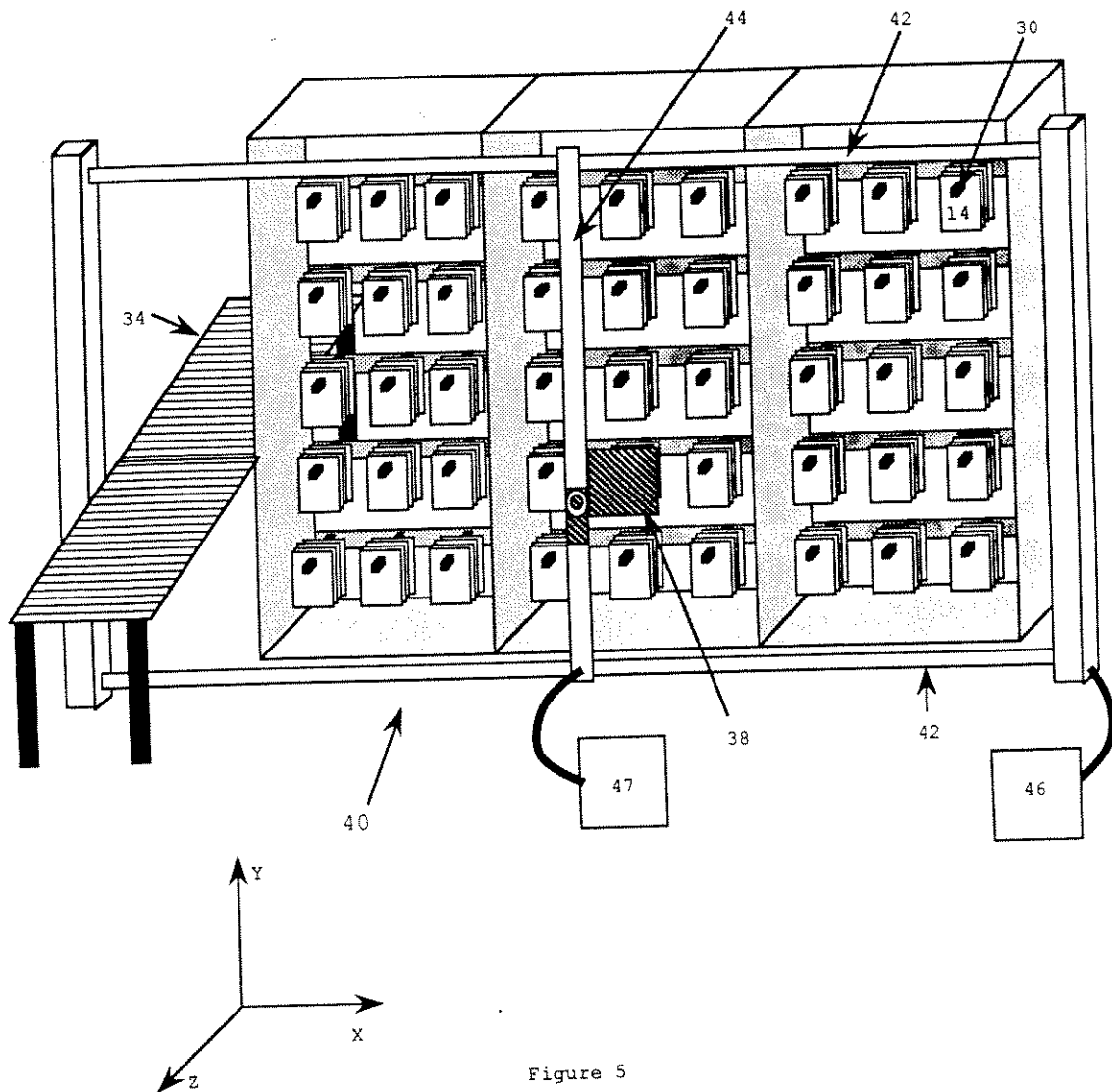


Figure 4c

Print Of Drawing
As Original Filed

07/469217



Print Of Drawing
As Original Filed

07/469217

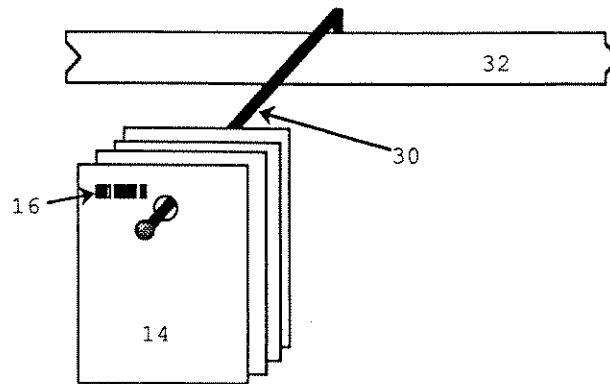


Figure 6A

Print Of Drawing
As Original Filed

07/469217

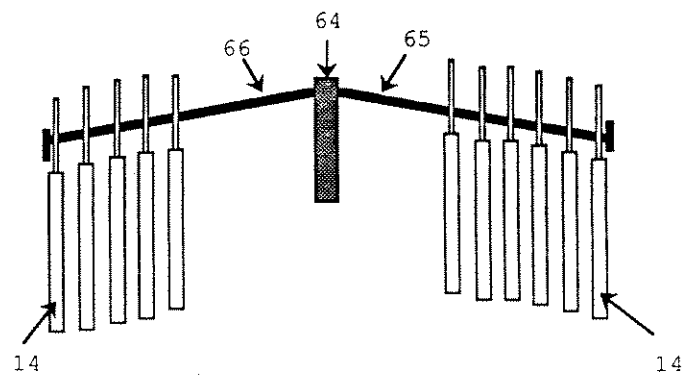


Figure 6B

Print Of Drawing
As Original Filed

07/469217

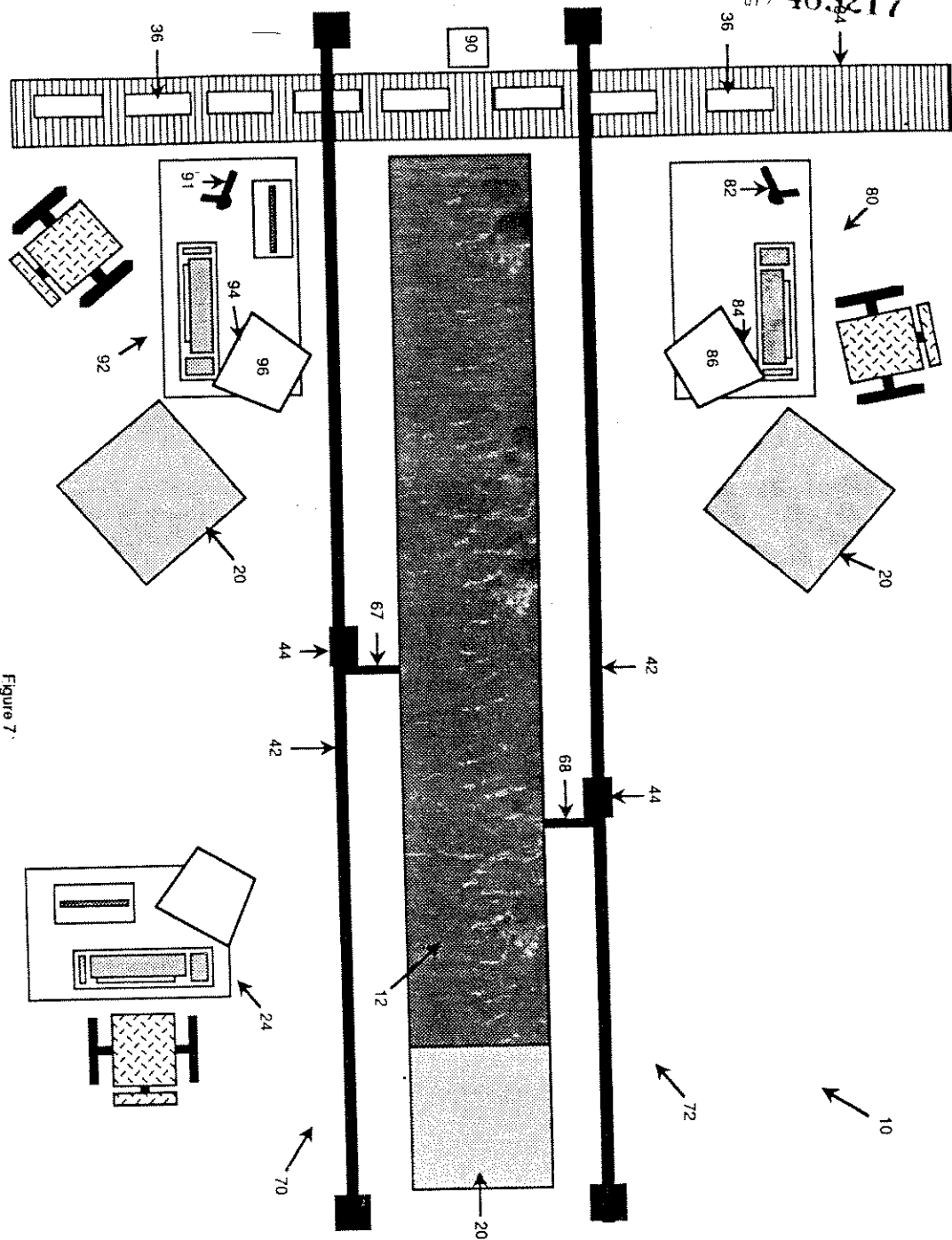


Figure 7.

Print Of Drawing
As Original Filed

PROCESS A PATIENT ORDER

07/469217

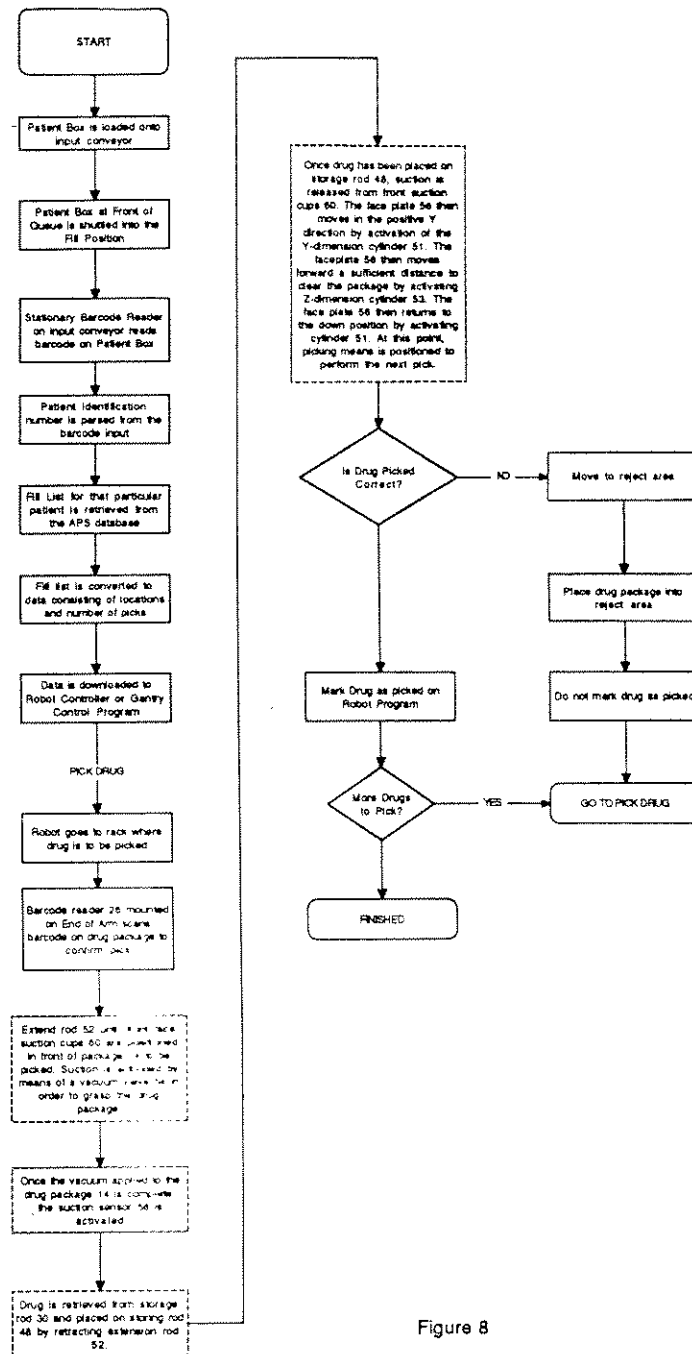


Figure 8

Printed Drawing
As Original Filed

DETAILED CHECK STATION

07/469217

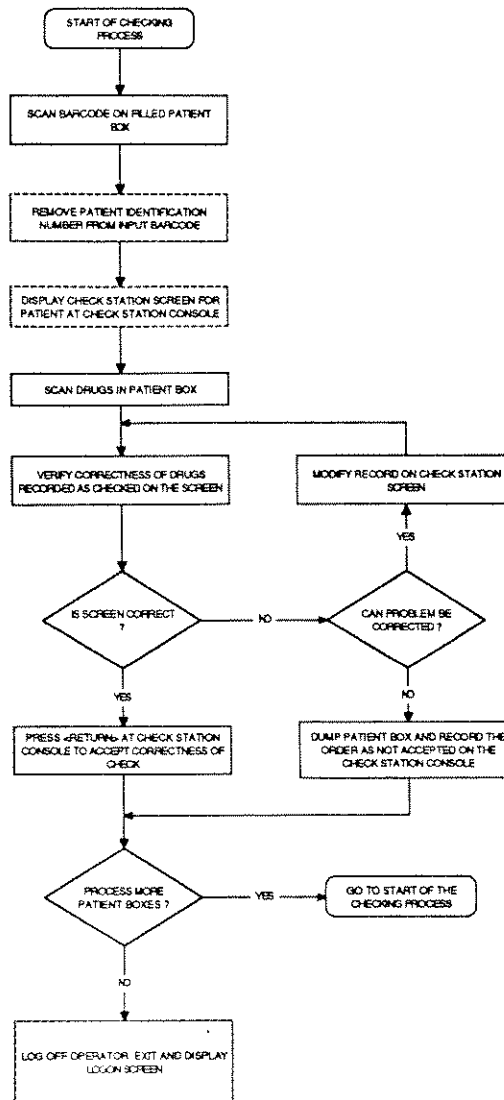


Figure 9

Print OF Drawing
As Original Filed

07/469217

STATION

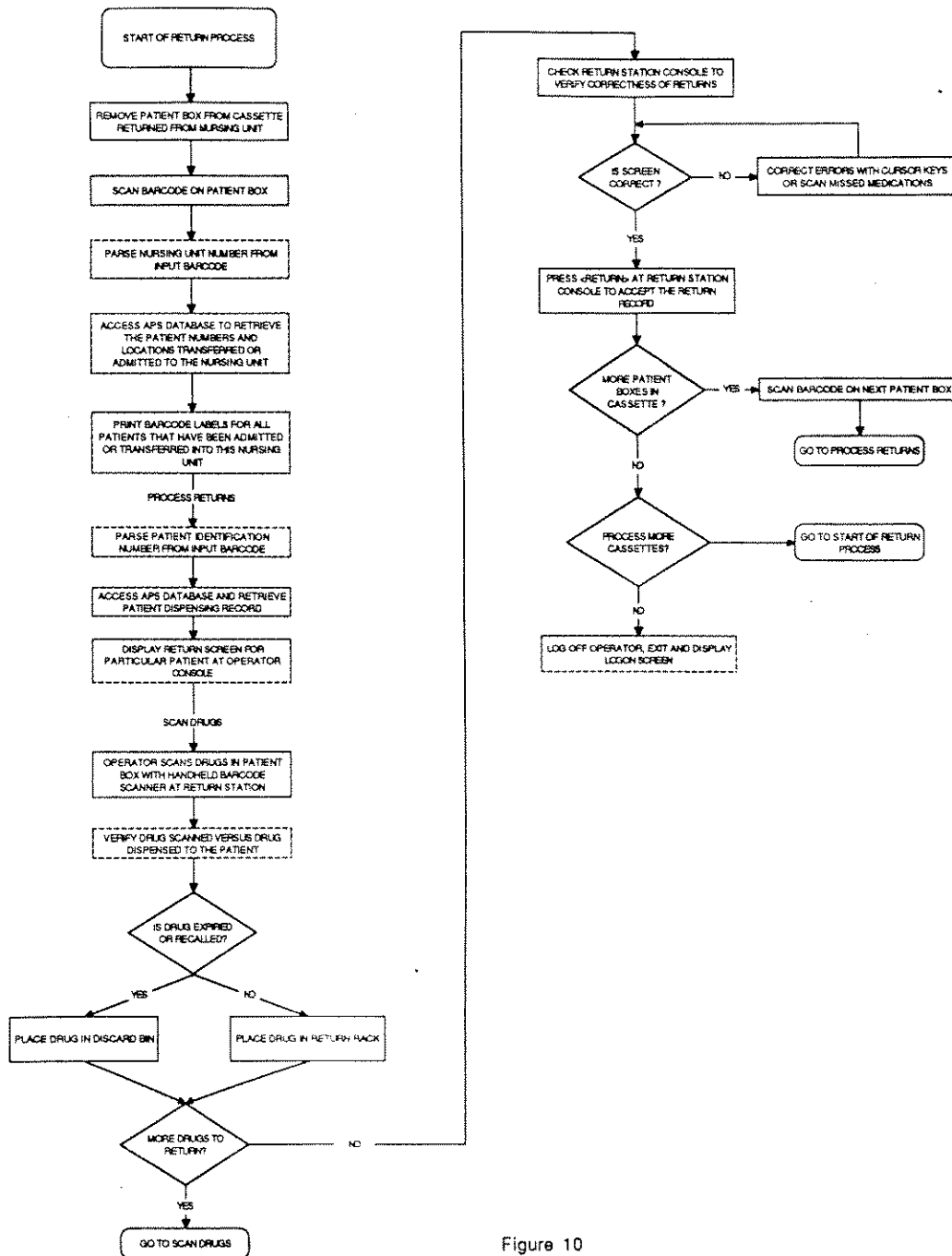


Figure 10

Print Of Drawing
As Original Filed

DETAILED RETURN DRUGS TO BIN

07/469217

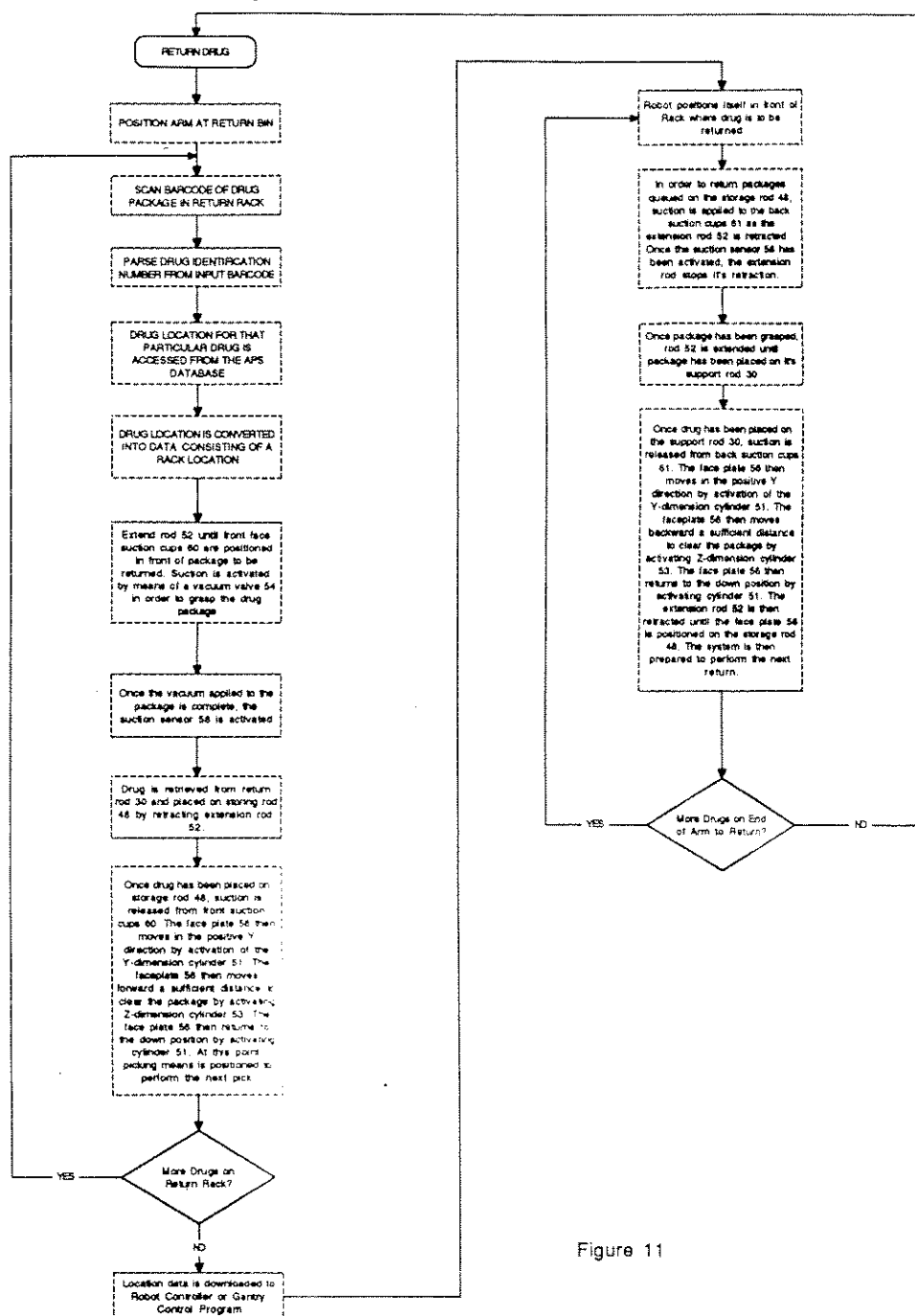


Figure 11


UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

 Address: COMMISSIONER OF PATENTS AND TRADEMARKS
 Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	PTO/INT. CL. KEY NO.
07/469,217	01/24/90	MC DONALD	S 1797003

 ANSEL M. SCHWARTZ
 ALDER, COHEN AND GRIGSHY
 625 LIBERTY AVE.,
 PITTSBURGH, PA 15222

 EXAMINER
 TRAMMELL, J

236

DATE MAILED: 05/10/91

 This is a communication from the examiner in charge of your application.
 COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☐ Responsive to communication filed on _____ ☐ This action is made final.

 A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter.
 Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input checked="" type="checkbox"/> Notice re Patent Drawing, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449. | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152 |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-23 are pending in the application.
 Of the above, claims _____ are withdrawn from consideration.
2. ☐ Claims _____ have been cancelled.
3. ☐ Claims _____ are allowed.
4. ☒ Claims 1-5 and 18-20 and 23 are rejected.
5. ☒ Claims 6-17 and 21-22 are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).
12. ☐ Acknowledgement is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

Serial No. 469,217

-2-

1) The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

2) The drawings are objected to because the blank boxes in Figs 1-7 must be provided with description labels (Rule 1.83(a)). Correction is required.

Applicant is required to submit a proposed drawing correction in response to this Office action. However, correction of the noted defect can be deferred until the application is allowed by the examiner.

3) The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 18-19 and 20 are rejected under 35 U.S.C. § 102(b) as being anticipated by Modery et al. (4766547).

As per claims 1-5 and 18-19, any conventional automatic storage and retrieval system with diverse application comprises: means for holding container, (or packages) each container having the same type of contents being held at a predetermined location by the holding means, said holding means having a plurality of predetermined locations corresponding to a plurality of different types of contents; means for supplying

Serial No. 469,217

-3-

containers to the holding means; and means for picking a ~~container~~ from the holding means that is identified in a order, or from the supplying means for the purpose of restocking the holding means, said picking means in communication with the holding means and supplying means, a computer having a database having a order to be filled; said computer guiding said picking means with said database such that the picking means picks a container according to the order to be filled and the picking means including means for determining the identity of a container and restocking the identified container according to its contains and its predetermined location in the holding means. For example Modery et al. shows this kind of automatic storage and retrieval system that meets all the claimed features, see Fig 1. The intended use for filling medicine prescriptions with a conventional automatic storage and retrieval system is held not to distinguish from prior art.

As per claim 20, Modery meets these claimed features, see Fig 1 item 20.

4) Claims 2-5 are rejected under 35 U.S.C. § 103 as being unpatentable over Modery et al. (47665471).

As per claims 2-5, Modery shows a conventional automatic storage and retrieval system as applied in the 102 rejection.

Modery et al. does not expressly state that this type of

Serial No. 469,217

-4-

conventional automatic storage and retrieval system can be use for packing of medicine.

Because of the well known diverse application of conventional automatic storage and retrieval systems it would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize just a system for fillings prescriptions for patients, thus obtaining all the features in claims 2-5.

5) The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 23 is rejected under 35 U.S.C. § 102(b) as being anticipated by Chucta (4669047).

As per claim 23, Chucta shows: A housing; means for storing packages or containers attached to the housing; means for obtaining a package, said obtaining means sidlingly attached to the housing such that it can move to pick a package from a support rod in a support structure when the housing is adjacent to and aligned with a support rod, and then move to place a picked package on the storing means; and means for identifying a package to be obtained by the obtaining means, said identifying means connected to the housing, see Fig. 7.

Serial No. 469,217

-5-

6) Claims 6-17 and 21-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7) The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jim Trammell whose telephone number is (703) 1066.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 0754.

JT
TRAMMELL:mrt
May 01, 1991

Jerry Smith
JERRY SMITH
SUPERVISORY PATENT EXAMINER
ART UNIT 236

TO SEPARATE, HOLD TOP AND BOTTOM EDGES, SNAP-APART AND DISCARD CARBON

JW

FORM PTO-892 (REV. 3-78)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		SERIAL NO. 07/469217	GROUP/ART UNIT 236	ATTACHMENT TO PAPER NUMBER 2		
NOTICE OF REFERENCES CITED				APPLICANT(S) Sean C. Mc Donald et al.				
U.S. PATENT DOCUMENTS								
*	DOCUMENT NO.	DATE	NAME	CLASS	SUB-CLASS	FILING DATE IF APPROPRIATE		
A	47792270	12/20/88	Toshida	364	478			
B	47786229	11/22/88	Henderson	364	478			
C	4733362	3/22/88	Hiraguchi	364	479			
D	4847764	7/11/89	Halvorsen	364	479			
E	4826024	1/23/90	Murphy et al.	235	361	10/19/87		
F	4766547	8/23/88	Modery et al.	364	478			
G	4669047	5/26/87	Chvetz	364	478			
H								
I								
J								
K								
FOREIGN PATENT DOCUMENTS								
*	DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUB-CLASS	PERTINENT SHTS. DWG.	PP. SPEC.
L								
M								
N								
O								
P								
Q								
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)								
R								
S								
T								
U								
EXAMINER	Jim Trammel			DATE	4/17/91			
* A copy of this reference is not being furnished with this office action. (See Manual of Patent Examining Procedure, section 707.05 (a).)								

PTO - 948
(Rev. 8-82)U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICEGROUP 236

ATTACHMENT TO PAPER NUMBER	<u>2</u>
S.N.	<u>469217</u>

NOTICE OF PATENT DRAWINGS OBJECTION

Drawing Corrections and/or new drawings may only be submitted in the manner set forth in the attached letter, "Information on How to Effect Drawing Changes" PTO-1474.

- A. ☒ The drawings, filed on 1/24/90, are objected to as informal for reason(s) checked below:
- | | |
|--|---|
| 1. <input type="checkbox"/> Lines Pale. | 11. <input type="checkbox"/> Parts in Section Must Be Hatched. |
| 2. <input type="checkbox"/> Paper Poor. | 12. <input checked="" type="checkbox"/> Solid Black Objectionable.
<u>Fig 1, 3, 4A, 5-7</u> |
| 3. <input type="checkbox"/> Numerals Poor. | 13. <input type="checkbox"/> Figure Legends Placed Incorrectly. |
| 4. <input type="checkbox"/> Lines Rough and Blurred. | 14. <input type="checkbox"/> Mounted Photographs. |
| 5. <input type="checkbox"/> Shade Lines Required. | 15. <input type="checkbox"/> Extraneous Matter Objectionable.
[37 CFR 1.84 (1)] |
| 6. <input type="checkbox"/> Figures Must be Numbered. | 16. <input checked="" type="checkbox"/> Paper Undersized; either 8½" x 14",
or 21.0 cm. x 29.7 cm. required.
<u>(Fig 1-11)</u> |
| 7. <input type="checkbox"/> Heading Space Required. | 17. <input checked="" type="checkbox"/> Proper A4 Margins Required:
<input type="checkbox"/> TOP 2.5 cm. <input type="checkbox"/> RIGHT 1.5 cm.
<input type="checkbox"/> LEFT 2.5 cm. <input type="checkbox"/> BOTTOM 1.0 cm. |
| 8. <input type="checkbox"/> Figures Must Not be Connected. | |
| 9. <input type="checkbox"/> Criss-Cross Hatching Objectionable. | |
| 10. <input type="checkbox"/> Double-Line Hatching Objectionable. | 18. <input checked="" type="checkbox"/> Other:
<u>- Fig legends small; must be larger (Figs 1-11)</u>
<u>- Halftone stippling dig (Fig 1, 3, 4A, 5 (B, 7))</u>
<u>- characters small; must be at least 1/8" tall (Figs 1-11)</u> |
- B. ☒ The drawings, submitted on 1/24/90, are so informal they cannot be corrected. New drawings are required. Submission of the new drawings MUST be made in accordance with the attached letter.

364.00 217CP236
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Sean McDonald et al.

Group No.: 236

Serial No. 33 07/469,217

Examiner: J. Trammell

Filed: SYSTEM FOR FILLING ORDERS

For:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

NOV 13 1991

CHINA

PETITION AND FEE FOR EXTENSION OF TIME (37 CFR 1.136(a))

1. This is a petition for an extension of time for a total period of three months:
(check and complete the applicable item below)

(X) to respond to the Office Letter mailed on May 10, 1991
() for _____
(indicate matter being extended)

2. A response in connection with the matter for which this extension is requested:

(X) is filed herewith.
() has been filed.

3. Applicant is

(X) a small entity -- verified statement:
() attached.
(X) already filed.
() other than a small entity.

4. Calculation of extension fee

	Total months requested	Fee for other than small entity	Fee for small entity
()	one month	\$ 100.00	\$ 50.00
()	two months	\$ 300.00	\$ 150.00
(X)	three months	\$ 730.00	\$ 365.00
()	four months	\$ 1150.00	\$ 575.00

Fee \$ _____

CERTIFICATE OF MAILING (37 CFR 1.8a)

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Commissioner of Patents and Trademarks, Washington, D.C. 20231.

070 AA 11/13/91 07469217

Angie Beyer 100 CK

Date: November 1, 1991

Angie Beyer
(Signature of person mailing paper)

(check and complete the next item, if applicable)

() An extension for _____ has already been secured and the fee paid
therefore of \$ _____ is deducted from the total fee due for the
total months of extension now requested.


Extension fee due with this request \$ _____

5. Fee Payment

(X) Attached is a check in the sum of \$ 365.00
() Charge fee to Account No. 02-4553 and for any additional extension
fee required or credit for any excess fee paid. A duplicate of this
petition is attached.

Reg. No.: 29,362

Tel. No.: 412-562-1632


Lynn J. Alstadt
Buchanan Ingersoll Professional Corporation
56th Floor, 600 Grant Street
Pittsburgh, Pennsylvania 15219



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Group Art Unit 236 : PATENT APPLICATION
Examiner J. Trammell :
In re application of :
SEAN McDONALD et al. : SYSTEM FOR FILLING ORDERS
Serial No. 07/469,217 :
Filed January 24, 1990 :

H/a
11/20/91
mc

A M E N D M E N T

Pittsburgh, Pennsylvania 15219

November 1, 1991

Hon. Commissioner of Patents and Trademarks

Washington, D.C. 20231

Sir:

Change the title of this application from "A System for
Filling Orders" to -- System for Selecting and Delivering
Packages from a Holding Area to Fill Orders --.

Cancel claims 1 to 5, 18 to 21 and 23.

Amend the claims as follows:

1. (Amended) A system [as described in claim 5] for
selecting and delivering packages from a holding means or supply
means to fill orders comprising:

- a. [wherein the] holding means [includes a structure; and] comprised of a frame having a plurality of support rods [held by the structure, said rods] for holding [the] medicine packages, each rod associated with a given medicine and holding medicine packages with only the same medicine[.];
- b. means for supplying medicine packages to the support rods;
- c. means for picking medicine packages from the support rods in accordance with instructions received from a computer, said picking means being able to access the holding means and the supply means;
- d. a computer having a database containing the locations of all packages in the holding means able to receive orders for packages and able to direct the means for picking packages.
-

In claim 7, line 2, change "structure" to -- holding means --.

In claim 22, line 1, change "claim 21" to -- claim 6 --.

REMARKS

This is in response to the Office Action dated May 10, 1991. A Power of Attorney and Request for Extension of Time are filed herewith. Applicants understand that previous counsel has submitted the appropriate request and fees for a two month extension of time. For that reason, only the third month extension fee is submitted by check. Should the fee not have been received for the first two months or should additional fees be due, the Examiner is authorized to charge those fees to Deposit Account No. 02-4553.

In the Office Action the Examiner objected to the title and the drawings, rejected claims 1 to 5, 18 to 20 and 23 and objected to the remaining claims. By this amendment applicants have provided a more specific title, cancelled the rejected claims and claim 21 and have rewritten the objectionable claims. Applicants respectfully request that a response to the drawing objection be deferred until claims have been allowed.

Claim 6 has been written in independent form. The Examiner stated that claim 6 would be allowable if rewritten. Claims 7 thru 17 and 22 depend from allowable claim 6 and are, therefore, allowable. Since all pending claims are allowable,

reconsideration of the claims and issuance of a Notice of Allowance are respectfully requested.

Respectfully submitted,
BUCHANAN INGERSOLL, P.C.

By *Lynn J. Alstadt*
Lynn J. Alstadt
Registration No. 29,362
Attorneys for Applicants

(412) 562-1632

I hereby certify that this correspondence is being deposited
with the United States Patent Service as first-class mail in a
envelope addressed to: The Commissioner of Patents and
Trademarks, Washington, D.C. 20231 on 11-1-91

Angie Beyer
Signature
November 1, 1991
Date of Signature



NO. 1083

Case Docket No.: 910517

Re application of: Sean McDonald et al.

Serial No.: 07/469,217

Filed: January 24, 1990

For: SYSTEM FOR FILLING ORDERS

THE COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, DC 20231

Sir:

Transmitted herewith is an amendment in the above-identified application.

- ☒ Small entity status of this application under 37 CFR 1.9 and 1.27 has been established by a verified statement previously submitted.
- ☐ A verified statement to establish small entity status under 37 CFR 1.9 and 1.27 is enclosed.
- ☒ No additional fee is required.

The fee has been calculated as shown below:

	(Col. 1)		(Col. 2)		SMALL ENTITY			OTHER THAN A SMALL ENTITY	
	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NO. PREVIOUSLY PAID FOR	PRESENT EXTRA	ADDIT. RATE	ADDIT. FEE	OR	RATE	FEE
Total	10	MINUS	23	--	x 10 =	\$	OR	x 20 =	\$
Indep	1	MINUS	6	--	x 30 =	\$	OR	x 60 =	\$
FIRST PRESENTATION OF MULTIPLE DEP. CLAIM					+ 100 =	\$	OR	+ 200 =	\$
					TOTAL ADDIT. FEE	\$ --	OR	TOTAL	\$

- * If entry in Col. 1 is less than entry in Col. 2, write "0" in Col. 3.
- ** If the "Highest No. Previously Paid For" IN THIS SPACE is less than 20, write "20" in this space.
- *** If the "Highest No. Previously Paid For" IN THIS SPACE is less than 3, write "3" in this space.

- ☐ Please charge by Deposit Account No. 02-4553 the amount of \$ _____. A duplicate copy of this sheet is attached.
- ☐ A check in the amount of \$ _____ is attached.
- ☒ The Commissioner is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. 02-4553. A duplicate copy of this sheet is attached.
- ☒ Any filing fees required under 37 CFR 1.16 for the presentation of extra claims.
- ☐ Any patent application processing fees under 37 CFR 1.17.

Respectfully submitted,

Registration No.

RICHMAN LINGERSOLL PROFESSIONAL CORPORATION

(412) 562-163 2

LJA/bem


UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

 Address: COMMISSIONER OF PATENTS AND TRADEMARKS
 Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
---------------	-------------	-----------------------	---------------------

07/469,217 01/24/90 MC DONALD

S 1797003

EXAMINER

TRAMMELL, J

ART UNIT

PAPER NUMBER

2306

5

DATE MAILED: 01/23/92

 ANGEL M. SCHWARTZ
 ALDER, COHEN AND GRIGSHY
 625 LIBERTY AVE.,
 PITTSBURGH, PA 15222

NOTICE OF ALLOWABILITY
PART I.

1. ☒ This communication is responsive to amendment A filed 11/4/91
2. ☒ All the claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice Of Allowance And Issue Fee Due or other appropriate communication will be sent in due course.
3. ☒ The allowed claims are 6-17 and 22, (claims 1 to 5, 18 to 21 and 23 have been canceled)
4. ☐ The drawings filed on _____ are acceptable.
5. ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has [] been received, [] not been received. [] been filed in parent application Serial No. _____, filed on _____.
6. ☐ Note the attached Examiner's Amendment.
7. ☐ Note the attached Examiner Interview Summary Record, PTOL-413.
8. ☐ Note the attached Examiner's Statement of Reasons for Allowance.
9. ☒ Note the attached NOTICE OF REFERENCES CITED, PTO-892.
10. ☐ Note the attached INFORMATION DISCLOSURE CITATION, PTO-1449.

PART II.

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE THREE MONTHS FROM THE "DATE MAILED" indicated on this form. Failure to timely comply will result in the ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

1. ☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.
2. ☒ APPLICANT MUST MAKE THE DRAWING CHANGES INDICATED BELOW IN THE MANNER SET FORTH ON THE REVERSE SIDE OF THIS PAPER.
 - a. ☒ Drawing informalities are indicated on the NOTICE RE PATENT DRAWINGS, PTO-948, attached ~~hereto~~ to Paper No. 2. CORRECTION IS REQUIRED.
 - b. ☐ The proposed drawing correction filed on _____ has been approved by the examiner. CORRECTION IS REQUIRED.
 - c. ☒ Approved drawing corrections are described by the examiner in Para No. 2 page 2. ~~the attached EXAMINER'S AMENDMENT.~~ CORRECTION IS REQUIRED.
 - d. ☒ Formal drawings are now REQUIRED.

Any response to this letter should include in the upper right hand corner, the following information from the NOTICE OF ALLOWANCE AND ISSUE FEE DUE: ISSUE BATCH NUMBER, DATE OF THE NOTICE OF ALLOWANCE, AND SERIAL NUMBER.

Attachments:

- ☒ Examiner's Amendment
- ☐ Examiner Interview Summary Record, PTOL-413
- ☐ Reasons for Allowance
- ☒ Notice of References Cited, PTO-892
- ☐ Information Disclosure Citation, PTO-1449

- ☐ Notice of Informal Application, PTO-152
- ☐ Notice re Patent Drawings, PTO-948
- ☐ Listing of Bonded Draftsmen
- ☐ Other

Jerry Smith
JERRY SMITH
 SUPERVISORY PATENT EXAMINER
 ART UNIT 236

TO SEPARATE, HOLD TOP AND BOTTOM EDGES, SNAP-APART AND DISCARD CARBON

1 05 2

FORM PTO-892 (REV. 3-78)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		SERIAL NO. 07/49217	GROUP/ART UNIT 2306	ATTACHMENT TO PAPER NUMBER 5
NOTICE OF REFERENCES CITED				APPLICANT(S) Sean C. McDonald et al.		

U.S. PATENT DOCUMENTS							
*	A	DOCUMENT NO.	DATE	NAME	CLASS	SUB-CLASS	FILING DATE IF APPROPRIATE
*	A	50479489	10/91	Turner	364	479	4/25/88
*	B	3919045	11/4/75	Williams et al.	221	15	
*	C	5636462	7/30/91	Kaufman et al.	364	479	9/29/86
	D						
	E						
	F						
	G						
	H						
	I						
	J						
	K						

FOREIGN PATENT DOCUMENTS									
*	L	DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUB-CLASS	PERTINENT SHTS. DWG.	PP. SPEC.
	L								
	M								
	N								
	O								
	P								
	Q								

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)	
R	
S	
T	
U	

EXAMINER Sim Tamme	DATE 1/14/92	
-----------------------	-----------------	--

* A copy of this reference is not being furnished with this office action.
(See Manual of Patent Examining Procedure, section 707.05 (a).)



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: Box ISSUE FEE
COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

LYNN J. ALSTADT
BUCHANAN INGERSOLL, P.C..
56TH FLR., 600 GRANT ST.
PITTSBURGH, PA 15219

Corrected
**NOTICE OF ALLOWANCE
AND ISSUE FEE DUE**

☐ Note attached communication from the Examiner

☐ This notice is issued in view of applicant's communication filed _____

SERIES CODE/SERIAL NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
07/469,217	01/24/90	013	TRAMMELL, J	2306 01/23/92
First Named Applicant	MC DONALD,	SEAN C.		

TITLE OF INVENTION: SYSTEM FOR SELECTING AND DELIVERING PACKAGES FROM A HOLDING AREA TO FILL ORDERS (AS AMENDED)

	ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN TYPE	SMALL ENTITY	FEE DUE	DATE DUE
2	1797003	364-478.000	W52	UTILITY	YES	\$565.00	04/23/92

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.

THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.

HOW TO RESPOND TO THIS NOTICE:

I. Review the SMALL ENTITY Status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the Status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or
- B. If the Status is the same, pay the FEE DUE shown above.

If the SMALL ENTITY is shown as NO:

- A. Pay FEE DUE shown above, or
- B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.

II. Part B of this notice should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by a charge to deposit account, Part B should be completed and returned. If you are charging the ISSUE FEE to your deposit account, Part C of this notice should also be completed and returned.

III. All communications regarding this application must give series code (or filing date), serial number and batch number. Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees.



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: Box ISSUE FEE
COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

ANGEL M. SCHWARTZ
ALDER, COHEN AND GRIGSHY
625 LIBERTY AVE.,
PITTSBURGH, PA 15222

**NOTICE OF ALLOWANCE
AND ISSUE FEE DUE**

- ☐ Note attached communication from the Examiner
☐ This notice is issued in view of applicant's communication filed

SERIES CODE/SERIAL NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
07/469,217	01/24/90	013	TRAMMELL, J	2306 01/23/92
First Named Applicant	MC DONALD, SEAN C.			

TITLE OF INVENTION: SYSTEM FOR SELECTING AND DELIVERING PACKAGES FROM A HOLDING AREA TO
FILL ORDERS (AS AMENDED)

	ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
2	1797003	364-478.000	W52	UTILITY	YES	\$565.00	04/23/92

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT.
PROSECUTION ON THE MERITS IS CLOSED.**

**THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS
APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.**

HOW TO RESPOND TO THIS NOTICE:

I. Review the SMALL ENTITY Status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the Status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or
B. If the Status is the same, pay the FEE DUE shown above.

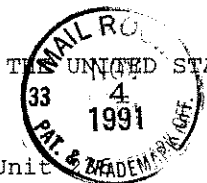
If the SMALL ENTITY is shown as NO:

- A. Pay FEE DUE shown above, or
B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.

- II. Part B of this notice should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by a charge to deposit account, Part B should be completed and returned. If you are charging the ISSUE FEE to your deposit account, Part C of this notice should also be completed and returned.
- III. All communications regarding this application must give series code (or filing date), serial number and batch number. Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



11/6

Group Art Unit : PATENT APPLICATION
 Examiner J. Trammell :
 In re application of :
 SEAN McDONALD et al. : SYSTEM FOR FILLING ORDERS
 Serial No. 07/469,217 :
 Filed January 24, 1990 :

RECEIVED
 NOV 15 1991

POWER OF ATTORNEY

11/11/91

Automated Healthcare, Inc., assignee of the above-identified application, hereby appoints Lynn J. Alstadt, Registration No. 29,362; George P. Baier, Registration No. 26,717; Paul A. Beck, Registration, No. 22,289; Michael L. Dever, Registration No. 32,216; Gordon R. Harris, Registration No. 15,384; George Raynovich, Jr., Registration No. 19,829 and Alvin E. Ring, Registration No. 18,697, of the firm of Buchanan Ingersoll, P.C., whose post office address is 56th Floor, 600 Grant Street, Pittsburgh, Pennsylvania 15219, our attorneys in the above-identified application with full power of substitution and revocation, to amend or otherwise act relative to it as they may deem advisable, to transact all business in the Patent and Trademark Office in connection therewith and generally to do all matters and things needful in the premises, as fully and to all intents and purposes as the undersigned could do.

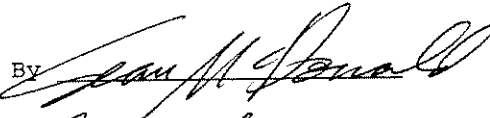
All powers of attorney previously given are hereby
revoked.

Please address all future correspondence to:

Lynn J. Alstadt
BUCHANAN INGERSOLL, P.C.
56th Floor
600 Grant Street
Pittsburgh, Pennsylvania 15219
412-462-1632

Signed this 31 day of October, 1991

AUTOMATED HEALTHCARE, INC.

By 
President
Title



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Group Art Unit 236 : PATENT APPLICATION
Examiner J. Trammell :
In re application of :
SEAN McDONALD et al. : SYSTEM FOR FILLING ORDERS
Serial No. 07/469,217 :
Filed January 24, 1990 :

NEW POWER OF ATTORNEY AND
NEW CORRESPONDENCE ADDRESS

Pittsburgh, Pennsylvania 15219

November 1, 1991

Hon. Commissioner of Patents and Trademarks

Washington, D.C. 20231

Sir:

Enclosed is a new Power of Attorney including revocation
of the old Power.

Please address all future correspondence and telephone
calls in the above-entitled application to:

Lynn J. Alstadt
Buchanan Ingersoll, P.C.
56th Floor
600 Grant Street
Pittsburgh, Pennsylvania 15219
412-562-1632

Respectfully submitted,

BUCHANAN INGERSOLL, P.C.

By Lynn J. Alstadt
Lynn J. Alstadt
Registration 29,362
Attorneys for Applicants

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231.
on 11-1-91

Roger B. Byers
Buchanan Ingersoll

(412) 562-1632



**U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

J. Trammell: art unit 236

469,217 1/24/90
S. McDonald, et al

Paper No. 7

Ansel M. Schwartz
Alder, Cohen & Grigshy
625 Liberty Ave.
Pittsburgh, PA 15222

MAILED
JAN 30 1992
GROUP 230

This is in response to the communication re the Power of Attorney filed 11/4/91
assignee.

1. ☒ The power of attorney to you in this application has been revoked by the ~~applicant~~
2. ☐ In view of the notice in this application of the death of _____
his power of attorney is terminated.
3. ☒ The power of attorney to you in this application has been accepted by the Commissioner of Patents, & Trademarks.
4. ☐ The assignee in this application has intervened and appointed an attorney of his own selection. Further correspondence will be held
with said attorney. (Rule 36, Rules of Practice.)
5. ☐ The revocation of the power of attorney to _____ has been
entered and said attorney has been notified. Further correspondence will be addressed to you.
assignee
6. ☐ On _____, the applicant appointed _____
as additional attorney in this application. Further correspondence will continue to be addressed to you as specified
in the new power of attorney.
assignee
7. ☐ On _____, the applicant appointed _____
as additional attorney in this application. Further correspondence will be addressed to said attorney. MPEP 403.02
8. ☐ The associate power of attorney to you in this application has been revoked by the attorney of record.

Lynn J. Alstadt, et al

Lynn J. Alstadt
BUCHANAN INGERSOL, P. C.
56th Flr., 600 Grant St.
Pittsburgh, PA. 15219

For Director, Operation

RETAIN THIS COPY IN THE APPLICATION FILE


UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

 Address : COMMISSIONER OF PATENTS AND TRADEMARKS
 Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
07/469,217	01/24/90	MC DONALD	S 1797003

 LYNN J. ALSTADT
 BUCHANAN INGERSOLL, P.C.,
 56TH FLR., 600 GRANT ST.
 PITTSBURGH, PA 15219

EXAMINER	
TRAMMELL, J	
ART UNIT	PAPER NUMBER
2305	8

DATE MAILED: 10/22/92

NOTICE OF ABANDONMENT

This application is abandoned in view of:

- ☐ Applicant's failure to respond to the Office letter, mailed _____.
- ☐ Applicant's letter of express abandonment which is in compliance with 37 C.F.R. 1.138.
- ☐ Applicant's failure to timely file the response received _____ within the period set in the Office letter.
- ☒ Applicant's failure to pay the required issue fee within the statutory period of 3 months from the mailing date of 01-23-92 of the Notice of Allowance.
 - ☐ The issue fee was received on _____.
 - ☐ The issue fee has not been received in Allowed Files Branch as of _____.

In accordance with 35 U.S.C. 151, and under the provisions of 37 C.F.R. 1.316(b), applicant(s) may petition the Commissioner to accept the delayed payment of the issue fee if the delay in payment was unavoidable. The petition must be accompanied by the issue fee, unless it has been previously submitted, in the amount specified by 37 C.F.R. 1.17 (i), and a verified showing as to the causes of the delay.

If applicant(s) never received the Notice of Allowance, a petition for a new Notice of Allowance and withdrawal of the holding of abandonment may be appropriate in view of *Deigar Inc. v. Schuyler*, 172 U.S.P.Q. 513.
- ☐ Applicant's failure to timely correct the drawings and/or submit new or substitute formal drawings by _____ as required in the last Office action.
 - ☐ The corrected and/or substitute drawings were received on _____.
- ☐ The reason(s) below.

 DIRECT ANY INQUIRIES TO :
 PUBLISHING DIVISION
 MARCIA CAMPBELL
 (703) 305-8190
 OR
 PRISCILLA FULLER
 (703) 305-8203

Under the Paperwork Reduction Project, no fees are required to respond to a collection of information unless it displays a valid time, effort, or cost.

REQUEST FOR ACCESS TO AN ABANDONED APPLICATION UNDER 37 CFR 1.14

Bring completed form to:
File Information Unit
Crystal Plaza Three, Room 1001
2021 South Clark Place
Arlington, VA
Telephone: (703) 305-2750

In re Application of
McDonald
Application Number
07-469217 Filed
1/24/90
Paper No. #9

I hereby request access under 37 CFR 1.14(a)(1)(iv) to the application file record of the above-identified ABANDONED application, which is identified in, or to which a benefit is claimed, in the following document (as shown in the attachment):

United States Patent Application Publication No. _____, page _____, line _____
United States Patent Number 5593267, column _____, line _____, or
WIPO Pub. No. _____, page _____, line _____

Related Information about Access to Pending Applications (37 CFR 1.14):
Direct access to pending applications is not available to the public but copies may be available and may be purchased from the Office of Public Records upon payment of the appropriate fee (37 CFR 1.19(b)), as follows:
For published applications that are still pending, a member of the public may obtain a copy of:
the file contents;
the pending application as originally filed; or
any document in the file of the pending application.
For unpublished applications that are still pending:
(1) If the benefit of the pending application is claimed under 35 U.S.C. 119(e), 120, 121, or 365 in another application that has: (a) issued as a U.S. patent, or (b) published as a statutory invention registration, a U.S. patent application publication, or an international patent application publication in accordance with PCT Article 21(2), a member of the public may obtain a copy of:
the file contents;
the pending application as originally filed; or
any document in the file of the pending application.
(2) If the application is incorporated by reference or otherwise identified in a U.S. patent, a statutory invention registration, a U.S. patent application publication, or an international patent application publication in accordance with PCT Article 21(2), a member of the public may obtain a copy of:
the pending application as originally filed.

Deborah Harris
Signature
Deborah Harris
Typed or printed name
Registration Number, if applicable
703 415 0371
Telephone Number

1-24-07
Date

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In re Application of

Application Number

07/469217

Filed

1/24/80

Paper No. 10

I hereby request access under 37 CFR 1.14(a)(1)(iv) to the application file record of the above-identified ABANDONED application, which is not within the file jacket of a pending Continued Prosecution Application (CPA) (37 CFR 1.53(d)) and which is identified in, or to which a benefit is claimed, in the following document (as shown in the attachment):

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Sharon Kwo

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US005468110A

United States Patent [19]
McDonald et al.

[11] **Patent Number:** **5,468,110**
 [45] **Date of Patent:** **Nov. 21, 1995**

[54] **AUTOMATED SYSTEM FOR SELECTING
 PACKAGES FROM A STORAGE AREA**

[75] **Inventors:** Sean C. McDonald, Pittsburgh, Pa.;
 Ellen J. Hertz, Clemmons, N.C.;
 James A. Smith, Allison Park, Pa.;
 Gregory Toto, Santa Cruz, Calif.

[73] **Assignee:** Automated Healthcare, Inc.,
 Pittsburgh, Pa.

[21] **Appl. No.:** 295,495

[22] **Filed:** Aug. 25, 1994

Related U.S. Application Data

[63] Continuation of Ser. No. 871,832, Apr. 21, 1992, abandoned,
 which is a continuation-in-part of Ser. No. 469,217, Jan. 24,
 1990, abandoned

[51] **Int. Cl.⁶** B65G 1/04

[52] **U.S. Cl.** 414/273; 364/478; 414/280;
 414/268; 414/281; 414/285

[58] **Field of Search** 235/385, 351;
 414/266, 267, 268, 269, 270, 273, 274,
 277, 280, 281, 282, 331, 285; 221/3, 9,
 15; 364/478, 413.02, 479

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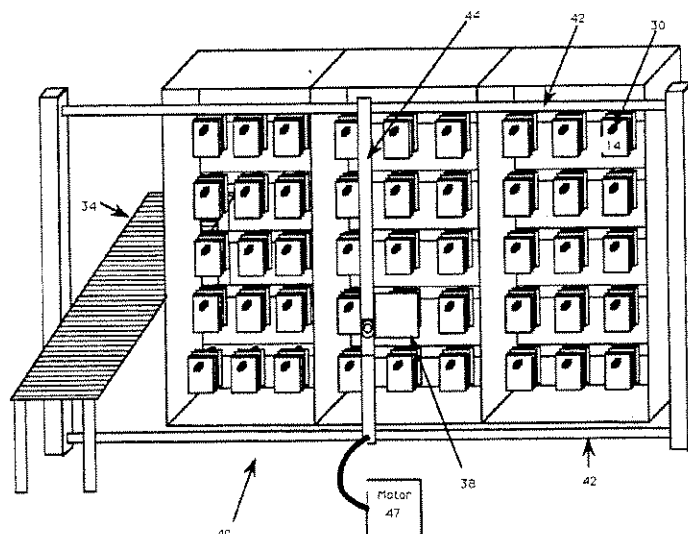
Primary Examiner—Frank E. Werner

Attorney, Agent, or Firm—Buchanan Ingersoll; Lynn J.
 Alstadt

[57] ABSTRACT

A system for filling orders, such as prescriptions for patients, comprising a device for holding packages. Each package has the same type of contents being held in a predetermined location by the holding device. Each package has an identity which defines the contents therein. The holding device has a plurality of predetermined locations corresponding to a plurality of different types of contents. Additionally, the system is comprised of a device for supplying packages to the holding device. Also, there is a device for picking a package from the holding device that is identified in the order for the purpose of restocking the holding device. The picking device is in communication with the holding device and supplying device. In a preferred embodiment, the contents of each package is a single dosage of medicine.

22 Claims, 19 Drawing Sheets



PALM III APPLICATION FILE DATA CODING SHEET										U.S. DEPARTMENT OF COMMERCE - PATENT & TM OFFICE									
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FORM PTO-875 (REV. 1-85)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	SERIAL NO. <i>469217</i>	FILING DATE <i>1-24-90</i>
PATENT APPLICATION FEE DETERMINATION RECORD		APPLICANT (FIRST NAMED): <i>McDonald & Co</i>	

CLAIMS AS FILED - PART I

FOR	NO FILED	NO EXTRA
BASIC FEE		
TOTAL CLAIMS	<i>23</i> - 20 =	<i>3</i>
INDEP. CLAIMS	<i>6</i> - 3 =	<i>3</i>
MULTIPLE DEPENDENT CLAIM PRESENT		

* If the difference in col. 1 is less than zero, enter "0" in col. 2

SMALL ENTITY

RATE	FEE
	\$ 185
x 6	\$ <i>18</i>
x 18	\$ <i>18</i>
60	\$
TOTAL	\$ <i>239</i>

OTHER THAN A
SMALL ENTITY

RATE	FEE
	\$ 370
x 12	\$ <i>36</i>
x 36	\$ <i>36</i>
120	\$
TOTAL	\$

CLAIMS AS AMENDED - PART II

AMENDMENT A	(1)	(2)	(3)
	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NO PREVIOUSLY PAID FOR	PRESENT EXTRA.
	TOTAL	MINUS	**
	INDEP	MINUS	***
FIRST PRESENTATION OF MULTIPLE DEP. CLAIM			

SMALL ENTITY

RATE	ADDIT FEE
	\$
x 6	\$
x 18	\$
60	\$
TOTAL ADDIT. FEE	\$

OTHER THAN A
SMALL ENTITY

RATE	ADDIT FEE
	\$
x 12	\$
x 36	\$
120	\$
TOTAL	\$

AMENDMENT B	(1)	(2)	(3)
	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NO PREVIOUSLY PAID FOR	PRESENT EXTRA.
	TOTAL	MINUS	**
	INDEP	MINUS	***
FIRST PRESENTATION OF MULTIPLE DEP. CLAIM			

RATE	ADDIT FEE
	\$
x 6	\$
x 18	\$
60	\$
TOTAL ADDIT. FEE	\$

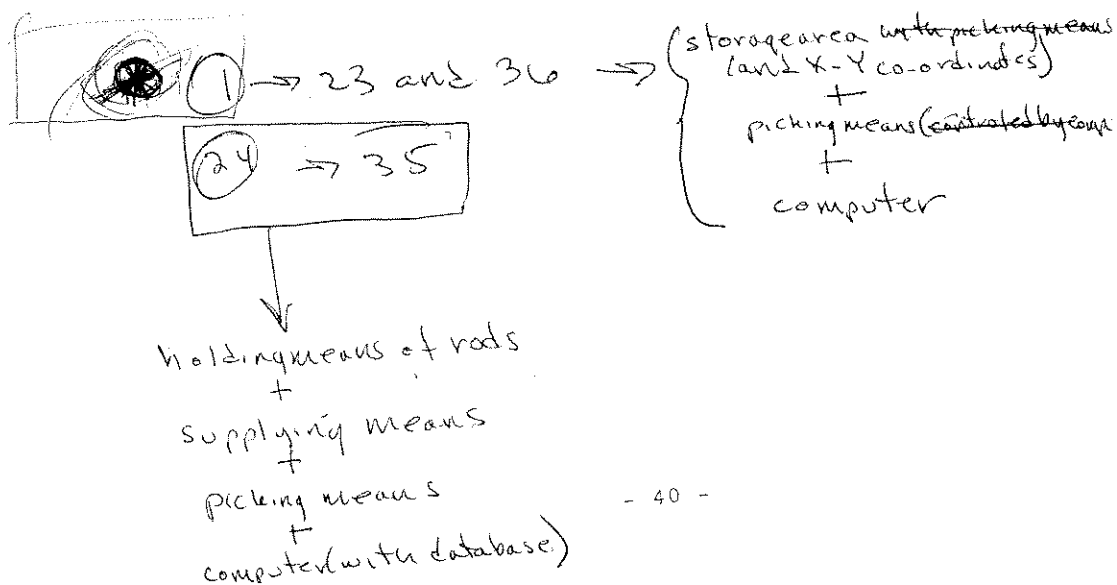
RATE	ADDIT FEE
	\$
x 12	\$
x 36	\$
120	\$
TOTAL	\$

AMENDMENT C	(1)	(2)	(3)
	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NO PREVIOUSLY PAID FOR	PRESENT EXTRA.
	TOTAL	MINUS	**
	INDEP	MINUS	***
FIRST PRESENTATION OF MULTIPLE DEP. CLAIM			

RATE	ADDIT FEE
	\$
x 6	\$
x 18	\$
60	\$
TOTAL ADDIT. FEE	\$

RATE	ADDIT FEE
	\$
x 12	\$
x 18	\$
60	\$
TOTAL	\$

* If the entry in Col. 1 is less than the entry in Col. 2, write "0" in Col. 3.
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 *** If the Highest No. Previously Paid For in THIS SPACE is less than 3, enter "3".



- 40 -

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<small>* U.S.GPO 1991-0-281-604/40410</small>		

